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**County specific computer generated reports.*

ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS

Dundy County, Nebraska: Update

Map symbol	Soil name	Acres	Percent
1331	Bankard Sand, 0 To 2 Percent Slopes, Occasionally Flooded-----	252	*
1465	Benkelman Very Fine Sandy Loam, 0 To 2 Percent Slopes-----	6,682	1.1
1500	Blackwood Loam, 0 To 1 Percent Slopes-----	38,844	6.6
1502	Blackwood Loam, 1 To 3 Percent Slopes-----	16,582	2.8
1524	Blanche Loamy Sand, 0 To 3 Percent Slopes-----	599	0.1
1526	Blanche Loamy Sand, 3 To 6 Percent Slopes-----	646	0.1
1700	Bolent-Almeria Complex, 0 To 2 Percent Slopes, Channeled, Frequently Flooded-----	8,654	1.5
1940	Calamus Coarse Sand, 0 To 2 Percent Slopes, Rarely Flooded-----	4,081	0.7
2140	Colfer Sand, 0 To 3 Percent Slopes-----	994	0.2
2250	Craft Very Fine Sandy Loam, 0 To 2 Percent Slopes, Rarely Flooded-----	1,169	0.2
2254	Craft Very Fine Sandy Loam, 0 To 2 Percent Slopes, Channeled, Frequently Flooded-----	2,262	0.4
2394	Dailey Loamy Sand, 0 To 3 Percent Slopes-----	6,411	1.1
2630	Duroc Loam, 0 To 1 Percent Slopes-----	1,959	0.3
3280	Haigler Very Fine Sandy Loam, 0 To 2 Percent Slopes, Rarely Flooded-----	4,616	0.8
4042	Jayem Loamy Sand, 0 To 3 Percent Slopes-----	23,731	4.0
4140	Kanorado Silty Clay Loam, 6 To 9 Percent Slopes-----	165	*
4380	Laird Fine Sandy Loam, 0 To 2 Percent Slopes-----	1,815	0.3
4665	Lodgepole Silty Clay Loam, Occasionally Ponded, 0 To 1 Percent Slopes-----	307	*
4667	Lodgepole Silty Clay Loam, Frequently Ponded, 0 To 1 Percent Slopes-----	373	*
5949	Otero Fine Sandy Loam, 0 To 2 Percent Slopes-----	3,682	0.6
5975	Overlake Sand, 0 To 3 Percent Slopes-----	14,361	2.4
6091	Pits, Sand And Gravel-----	117	*
6570	Sanborn Loam, 0 To 2 Percent Slopes, Rarely Flooded-----	2,946	0.5
6632	Sarben Loamy Sand, 0 To 3 Percent Slopes-----	5,442	0.9
6633	Sarben Loamy Sand, 3 To 6 Percent Slopes-----	19,672	3.3
6634	Sarben Loamy Sand, 6 To 9 Percent Slopes-----	8,233	1.4
6635	Sarben Loamy Sand, 9 To 30 Percent Slopes-----	8,337	1.4
6700	Satanta Fine Sandy Loam, 0 To 2 Percent Slopes-----	5,525	0.9
6820	Scoville Loamy Sand, Calcareous, 1 To 3 Percent Slopes-----	1,887	0.3
7090	Sulco Fine Sandy Loam, 3 To 6 Percent Slopes-----	3,830	0.6
7096	Sulco Loam, 3 To 6 Percent Slopes-----	5,398	0.9
7098	Sulco Loam, 6 To 9 Percent Slopes-----	9,415	1.6
7100	Sulco Loam, 9 To 30 Percent Slopes-----	34,334	5.8
7102	Sulco Complex, 9 To 60 Percent Slopes-----	26,321	4.5
7152	Tassel-Ashollow-Rock Outcrop Complex, 9 To 60 Percent Slopes-----	1,331	0.2
7461	Ulysses Loam, 1 To 3 Percent Slopes-----	7,106	1.2
7462	Ulysses Loam, 3 To 6 Percent Slopes-----	7,594	1.3
7602	Valent Loamy Sand, 3 To 9 Percent Slopes-----	3,793	0.6
7610	Valent Sand, 0 To 3 Percent Slopes-----	20,139	3.4
7612	Valent Sand, 3 To 9 Percent Slopes-----	131,655	22.3
7616	Valent Sand, Rolling-----	134,007	22.7
7618	Valent Complex, Rolling And Hilly-----	13,223	2.2
9999a	Water Areas Greater Than 40 Acres-----	771	0.1
	Total-----	589,261	100.0

* Less than 0.1 percent.

Nontechnical Soil Descriptions
Dundy County, Nebraska

Nontechnical soil descriptions describe soil properties or management considerations specific to a soil map unit or group of map units, shown in the NonTechnical Descriptions report. These descriptions are written in terminology that Non-technical users of soil survey information can understand. Nontechnical soil descriptions are a powerful tool for creating reports. These high quality, easy to read reports can be generated by conservation planners and other NRCS employees for distribution to land users. Soil map unit descriptions and National Soil Information System records are the basis for these descriptions.

1331 Bankard Sand, 0 To 2 Percent Slopes, Occasionally Flooded

Bankard soil makes up 95 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is negligible. The parent material consists of sandy alluvium. This soil is somewhat excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the No Site range site. This soil is in the irrigated land capability class 4w. It is in the nonirrigated land capability classification 6w.

1465 Benkelman Very Fine Sandy Loam, 0 To 2 Percent Slopes

Benkelman soil makes up 95 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping stream terrace on river valley. The runoff class is low. The parent material consists of calcareous loamy alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 5 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2c.

1500 Blackwood Loam, 0 To 1 Percent Slopes

Blackwood soil makes up 98 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level plain on tableland. The runoff class is negligible. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 1. It is in the nonirrigated land capability classification 2c.

1502 Blackwood Loam, 1 To 3 Percent Slopes

Blackwood soil makes up 98 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a gently sloping plain on tableland. The runoff class is low. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

1524 Blanche Loamy Sand, 0 To 3 Percent Slopes

Blanche soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on sandhills. The runoff class is very low. The parent material consists of loamy residuum weathered from calcareous sandstone. The soil is 20 to 40 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

1526 Blanche Loamy Sand, 3 To 6 Percent Slopes

Blanche soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping hillslope on interdune on sandhills. The runoff class is medium. The parent material consists of loamy residuum weathered from calcareous sandstone. The soil is 20 to 40 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 6e.

1700 Bolent-Almeria Complex, 0 To 2 Percent Slopes, Channeled, Frequently Flooded

Bolent soil makes up 65 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is negligible. The parent material consists of sandy alluvium. This soil is somewhat poorly drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is occasionally flooded and is not ponded. The top of the seasonal high water table is at 27 inches. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Subirrigated - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6w.

Nontechnical Soil Descriptions--Continued
Dundy County, Nebraska

Almeria soil makes up 25 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is negligible. The parent material consists of sandy alluvium. This soil is poorly drained. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is frequently flooded and is not ponded. The top of the seasonal high water table is at 9 inches. The soil contains a maximum amount of 5 percent calcium carbonate. This soil contains a very slightly saline horizon. This soil is in the Wet Land - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6w.

1940 Calamus Coarse Sand, 0 To 2 Percent Slopes, Rarely Flooded

Calamus soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping bar on flood plain on river valley. The runoff class is negligible. The parent material consists of sandy alluvium. This soil is moderately well drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 54 inches. This soil is in the Shallow To Gravel - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4s. It is in the nonirrigated land capability classification 6s.

2140 Colfer Sand, 0 To 3 Percent Slopes

Colfer soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on sandhills. The runoff class is negligible. The parent material consists of eolian sands over lacustrine deposits. This soil is somewhat excessively drained. The slowest permeability is moderately rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 30 percent calcium carbonate. This soil contains a very slightly saline horizon. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 6e.

2250 Craft Very Fine Sandy Loam, 0 To 2 Percent Slopes, Rarely Flooded

Craft soil makes up 95 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is low. The parent material consists of stratified, calcareous alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is rarely flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil contains a very slightly saline horizon. This soil is in the Silty Lowland - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2c.

2254 Craft Very Fine Sandy Loam, 0 To 2 Percent Slopes, Channeled, Frequently Flooded

Craft soil makes up 95 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping channel on flood plain on river valley. The runoff class is low. The parent material consists of stratified, calcareous alluvium. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is frequently flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil contains a very slightly saline horizon. This soil is in the Silty Overflow - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6w.

2394 Dailey Loamy Sand, 0 To 3 Percent Slopes

Dailey soil makes up 85 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on sandhills. The runoff class is negligible. The parent material consists of eolian sands. This soil is somewhat excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

2630 Duroc Loam, 0 To 1 Percent Slopes

Duroc soil makes up 98 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level swale on tableland. The runoff class is negligible. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Silty Lowland - Veg. Zone 2 range site. This soil is in the irrigated land capability class 1. It is in the nonirrigated land capability classification 2c.

3280 Haigler Very Fine Sandy Loam, 0 To 2 Percent Slopes, Rarely Flooded

Haigler soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is low. The parent material consists of sandy alluvium and loamy alluvium. This soil is moderately well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 54 inches. The soil contains a maximum amount of 10 percent calcium carbonate. This soil contains a slightly saline horizon, it has a horizon that is strongly sodic. This soil is in the Saline Lowland - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4s. It is in the nonirrigated land capability classification 4s.

Nontechnical Soil Descriptions--Continued
Dundy County, Nebraska

4042 Jayem Loamy Sand, 0 To 3 Percent Slopes

Jayem soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on sandhills. The runoff class is very low. The parent material consists of sandy and silty eolian deposits. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 4e.

4140 Kanorado Silty Clay Loam, 6 To 9 Percent Slopes

Kanorado soil makes up 95 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is very high. The parent material consists of loess over residuum weathered from calcareous shale. The soil is 40 to 60 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is very slow. It has a moderate available water capacity and a high shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 40 percent calcium carbonate. This soil contains a slightly saline horizon, it has a horizon that is slightly sodic. This soil is in the Clayey - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

4380 Laird Fine Sandy Loam, 0 To 2 Percent Slopes

Laird soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on sandhills. The runoff class is very low. The parent material consists of eolian deposits over lacustrine deposits. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 40 percent calcium carbonate. This soil contains a very slightly saline horizon, it has a horizon that is moderately sodic. This soil is in the Saline Lowland - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4s. It is in the nonirrigated land capability classification 4s.

4665 Lodgepole Silty Clay Loam, Occasionally Ponded, 0 To 1 Percent Slopes

Lodgepole soil makes up 95 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level playa on tableland. The runoff class is negligible. The parent material consists of loess. This soil is somewhat poorly drained. The slowest permeability is very slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is occasionally ponded. The top of the seasonal high water table is at 0 inches. This soil is in the Clayey Overflow - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4w. It is in the nonirrigated land capability classification 3w.

4667 Lodgepole Silty Clay Loam, Frequently Ponded, 0 To 1 Percent Slopes

Lodgepole soil makes up 95 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level playa on tableland. The runoff class is negligible. The parent material consists of loess. This soil is poorly drained. The slowest permeability is very slow. It has a high available water capacity and a high shrink swell potential. This soil is not flooded and is frequent ponded. The top of the seasonal high water table is at 0 inches. This soil is in the No Site range site. It is in the nonirrigated land capability classification 5w.

5949 Otero Fine Sandy Loam, 0 To 2 Percent Slopes

Otero soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level stream terrace on river valley. The runoff class is negligible. The parent material consists of alluvium. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 3e.

5975 Overlake Sand, 0 To 3 Percent Slopes

Overlake soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on sandhills. The runoff class is very low. The parent material consists of eolian sands over calcareous loamy lacustrine deposits. This soil is well drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil contains a very slightly saline horizon, it has a horizon that is slightly sodic. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 6e.

Nontechnical Soil Descriptions--Continued
Dundy County, Nebraska

6570 Sanborn Loam, 0 To 2 Percent Slopes, Rarely Flooded

Sanborn soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping flood plain on river valley. The runoff class is low. The parent material consists of calcareous stratified loamy and/or sandy alluvium. This soil is somewhat poorly drained. The slowest permeability is moderate. It has a moderate available water capacity and a low shrink swell potential. This soil is rarely flooded and is not ponded. The top of the seasonal high water table is at 27 inches. The soil contains a maximum amount of 10 percent calcium carbonate. This soil contains a slightly saline horizon, it has a horizon that is strongly sodic. This soil is in the Saline Subirrigated - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6s.

6632 Sarben Loamy Sand, 0 To 3 Percent Slopes

Sarben soil makes up 85 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on sandhills. The runoff class is very low. The parent material consists of sandy and loamy eolian deposits. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 4e.

6633 Sarben Loamy Sand, 3 To 6 Percent Slopes

Sarben soil makes up 85 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping interdune on sandhills. The runoff class is very low. The parent material consists of sandy and loamy eolian deposits. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

6634 Sarben Loamy Sand, 6 To 9 Percent Slopes

Sarben soil makes up 85 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is low. The parent material consists of sandy and loamy eolian deposits. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 6e.

6635 Sarben Loamy Sand, 9 To 30 Percent Slopes

Sarben soil makes up 85 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a strongly sloping to steep hillslope on upland. The runoff class is medium. The parent material consists of sandy and loamy eolian deposits. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 10 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6e.

6700 Satanta Fine Sandy Loam, 0 To 2 Percent Slopes

Satanta soil makes up 85 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on sandhills. The runoff class is low. The parent material consists of loamy eolian deposits. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

6820 Scoville Loamy Sand, Calcareous, 1 To 3 Percent Slopes

Scoville soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a gently sloping stream terrace on river valley. The runoff class is negligible. The parent material consists of sandy eolian deposits over loamy alluvium. This soil is somewhat excessively drained. The slowest permeability is moderate. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

Nontechnical Soil Descriptions--Continued
Dundy County, Nebraska

7090 Sulco Fine Sandy Loam, 3 To 6 Percent Slopes

Sulco soil makes up 85 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping hillslope on upland. The runoff class is low. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 4e.

7096 Sulco Loam, 3 To 6 Percent Slopes

Sulco soil makes up 95 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping hillslope on upland. The runoff class is low. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 4e.

7098 Sulco Loam, 6 To 9 Percent Slopes

Sulco soil makes up 95 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping hillslope on upland. The runoff class is medium. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 4e.

7100 Sulco Loam, 9 To 30 Percent Slopes

Sulco soil makes up 85 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a strongly sloping to steep hillslope on upland. The runoff class is high. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6e.

7102 Sulco Complex, 9 To 60 Percent Slopes

Sulco, eroded, soil makes up 70 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a steep to very steep hillslope on canyon on upland. The runoff class is high. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 7e.

Sulco soil makes up 20 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a strongly sloping to steep hillslope on canyon on upland. The runoff class is high. The parent material consists of loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Limy Upland - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6e.

7152 Tassel-Ashollow-Rock Outcrop Complex, 9 To 60 Percent Slopes

Tassel soil makes up 50 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a steep to very steep hillslope on canyon on upland. The runoff class is very high. The parent material consists of residuum weathered from calcareous sandstone. The soil is 6 to 20 inches deep to bedrock (paralithic). This soil is well drained. The slowest permeability is moderately rapid. It has a very low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Shallow Limy - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 7s.

Ashollow soil makes up 25 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a strongly sloping to steep hillslope on canyon on upland. The runoff class is medium. The parent material consists of loamy residuum weathered from calcareous sandstone. This soil is well drained. The slowest permeability is moderately rapid. It has a moderate available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Sandy - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6e.

Nontechnical Soil Descriptions--Continued
Dundy County, Nebraska

7461 Ulysses Loam, 1 To 3 Percent Slopes

Ulysses soil makes up 95 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a gently sloping plain on tableland. The runoff class is low. The parent material consists of calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 2e. It is in the nonirrigated land capability classification 2e.

7462 Ulysses Loam, 3 To 6 Percent Slopes

Ulysses soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping hillslope on upland. The runoff class is low. The parent material consists of calcareous loess. This soil is well drained. The slowest permeability is moderate. It has a high available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. The soil contains a maximum amount of 15 percent calcium carbonate. This soil is in the Silty - Veg. Zone 2 range site. This soil is in the irrigated land capability class 3e. It is in the nonirrigated land capability classification 3e.

7602 Valent Loamy Sand, 3 To 9 Percent Slopes

Valent soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping dune on sandhills. The runoff class is very low. The parent material consists of eolian sands. This soil is excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 6e.

7610 Valent Sand, 0 To 3 Percent Slopes

Valent soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a nearly level to gently sloping interdune on sandhills. The runoff class is negligible. The parent material consists of eolian sands. This soil is excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sandy - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 6e.

7612 Valent Sand, 3 To 9 Percent Slopes

Valent soil makes up 95 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a moderately sloping to strongly sloping dune on sandhills. The runoff class is very low. The parent material consists of eolian sands. This soil is excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands - Veg. Zone 2 range site. This soil is in the irrigated land capability class 4e. It is in the nonirrigated land capability classification 6e.

7616 Valent Sand, Rolling

Valent soil makes up 90 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a strongly sloping to steep dune on sandhills. The runoff class is low. The parent material consists of eolian sands. This soil is excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6e.

7618 Valent Complex, Rolling And Hilly

Valent soil makes up 55 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a steep to very steep dune on sandhills. The runoff class is low. The parent material consists of eolian sands. This soil is excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Sands - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 7e.

Valent soil makes up 35 percent of the map unit. This map unit is in the Central High Tableland Major Land Resource Area. This soil occurs on a strongly sloping to steep dune on sandhills. The runoff class is low. The parent material consists of eolian sands. This soil is excessively drained. The slowest permeability is rapid. It has a low available water capacity and a low shrink swell potential. This soil is not flooded and is not ponded. The seasonal high water table is at a depth of more than 6 feet. This soil is in the Choppy-Sands - Veg. Zone 2 range site. It is in the nonirrigated land capability classification 6e.

1331—Bankard sand, 0 to 2 percent slopes, Occasionally Flooded

Map Unit Composition

Bankard: 95 percent
Minor components: 5 percent

Component Descriptions

Bankard

MLRA: 72 - Central High Tableland
Landform: Flood plain on river valley
Parent material: Sandy alluvium
Slope: 0 to 2 percent
Drainage class: Somewhat excessively drained
Slowest permeability: Rapid (About 6.00 in/hr)
Available water capacity: Low (About 3.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Occasional
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: No Site
Land capability (irrigated): 4w
Land capability (nonirrigated): 6w

Typical Profile:

A—0 to 5 inches; loamy sand
C—5 to 60 inches; sand

Component note: Similar inclusions are soils with a loamy sand surface and soils with a coarse sand surface.

Minor Components

Almeria

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Poorly drained
Ecological site: Wet Land - Veg. Zone 2

General Considerations: This map unit is used as rangeland.

1465—Benkelman very fine sandy loam, 0 to 2 percent slopes

Map Unit Composition

Benkelman: 95 percent
Minor components: 5 percent

Component Descriptions

Benkelman

MLRA: 72 - Central High Tableland
Landform: Stream terrace on river valley
Parent material: Calcareous loamy alluvium
Slope: 0 to 2 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.1 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 2e
Land capability (nonirrigated): 2c

Typical Profile:

Ap—0 to 4 inches; very fine sandy loam
AC—4 to 11 inches; very fine sandy loam
C1—11 to 22 inches; very fine sandy loam
C2—22 to 34 inches; very fine sandy loam
C3—34 to 46 inches; very fine sandy loam
C4—46 to 80 inches; very fine sandy loam

Component note: Similar inclusions are soils with a loam surface and soils with a fine sandy loam surface.

Minor Components

Otero

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Sandy Lowland - Veg. Zone 2

General Considerations: The major use is cropland.

1500—Blackwood loam, 0 to 1 percent slopes

Map Unit Composition

Blackwood: 98 percent
Minor components: 2 percent

Component Descriptions

Blackwood

MLRA: 72 - Central High Tableland
Landform: Plain on tableland
Parent material: Loess

Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.1 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 1
Land capability (nonirrigated): 2c

Typical Profile:

Ap—0 to 6 inches; loam
 A—6 to 14 inches; loam
 Bw—14 to 23 inches; loam
 Bwb—23 to 28 inches; loam
 Bkb—28 to 34 inches; loam
 BCkb—34 to 43 inches; loam
 C—43 to 80 inches; loam

Component note: Similar inclusions are Ulysses that has a thinner dark surface and soils with more clay in the subsoil.

Minor Components

Lodgepole

Composition: About 2 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Clayey Overflow - Veg. Zone 2

General Considerations: The major use is cropland.

1502—Blackwood loam, 1 to 3 percent slopes

Map Unit Composition

Blackwood: 98 percent
 Minor components: 2 percent

Component Descriptions

Blackwood
MLRA: 72 - Central High Tableland
Landform: Plain on tableland
Parent material: Loess
Slope: 1 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: High (About 11.2 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 2e
Land capability (nonirrigated): 2e

Typical Profile:

Ap—0 to 8 inches; loam
 A—8 to 18 inches; loam
 Bw—18 to 32 inches; loam
 Bwkb—32 to 48 inches; loam
 Bkb—48 to 80 inches; loam

Component note: Similar inclusions are Ulysses that has a thinner dark surface and soils with more clay in the subsoil.

Minor Components

Lodgepole

Composition: About 2 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Clayey Overflow - Veg. Zone 2

General Considerations: The major use is cropland.

1524—Blanche loamy sand, 0 to 3 percent slopes

Map Unit Composition

Blanche: 90 percent
 Minor components: 10 percent

Component Descriptions

Blanche
MLRA: 72 - Central High Tableland
Landform: Interdune on sandhills
Parent material: Loamy residuum weathered from calcareous sandstone
Slope: 0 to 3 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Low (About 3.2 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None

Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Sandy - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:

A—0 to 7 inches; loamy sand
 Bw1—7 to 19 inches; fine sandy loam
 Bw2—19 to 22 inches; fine sandy loam
 Cr—22 to 80 inches; weathered bedrock

Component note: Similar inclusions are soils with a fine sandy loam surface.

Minor Components

Dailey

Composition: About 10 percent
Slope: 0 to 3 percent
Drainage class: Somewhat excessively drained
Ecological site: Sandy - Veg. Zone 2

General Considerations: This map unit is used as rangeland.

1526—Blanche loamy sand, 3 to 6 percent slopes

Map Unit Composition

Blanche: 90 percent
 Minor components: 10 percent

Component Descriptions

Blanche

MLRA: 72 - Central High Tableland
Landform: Hillslope on interdune on sandhills
Parent material: Loamy residuum weathered from calcareous sandstone
Slope: 3 to 6 percent
Depth to restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Low (About 4.0 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Sandy - Veg. Zone 2

Land capability (irrigated): 4e
Land capability (nonirrigated): 6e

Typical Profile:

Ap—0 to 7 inches; loamy sand
 A—7 to 10 inches; fine sandy loam
 Bw—10 to 22 inches; fine sandy loam
 BCk—22 to 28 inches; fine sandy loam
 Cr—28 to 80 inches; weathered bedrock

Component note: Similar inclusions are soils with a fine sandy loam surface.

Minor Components

Dailey

Composition: About 10 percent
Slope: 3 to 6 percent
Drainage class: Somewhat excessively drained
Ecological site: Sandy - Veg. Zone 2

General Considerations: This map unit is used as cropland and rangeland.

1700—Bolent-Almeria complex, 0 to 2 percent slopes, Channeled, Frequently Flooded

Map Unit Composition

Bolent: 65 percent
 Almeria: 25 percent
 Minor components: 10 percent

Component Descriptions

Bolent

MLRA: 72 - Central High Tableland
Landform: Flood plain on river valley
Parent material: Sandy alluvium
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Rapid (About 6.00 in/hr)
Available water capacity: Low (About 3.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Occasional
Ponding hazard: None
Depth to seasonal water saturation: About 18 to 36 inches
Runoff class: Negligible
Ecological site: Subirrigated - Veg. Zone 2
Land capability (nonirrigated): 6w

Typical Profile:

A—0 to 6 inches; loamy sand
 C—6 to 30 inches; sand
 Cg—30 to 80 inches; stratified sand

Almeria*MLRA:* 72 - Central High Tableland*Landform:* Flood plain on river valley*Parent material:* Sandy alluvium*Slope:* 0 to 2 percent*Drainage class:* Poorly drained*Slowest permeability:* Moderate (About 0.60 in/hr)*Available water capacity:* Low (About 5.4 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* Frequent*Ponding hazard:* None*Depth to seasonal water saturation:* About 0 to 18 inches*Runoff class:* Negligible*Ecological site:* Wet Land - Veg. Zone 2*Land capability (nonirrigated):* 6w*Typical Profile:*

A—0 to 2 inches; loam

Cg1—2 to 8 inches; stratified fine sandy loam to sand

Cg2—8 to 36 inches; stratified loamy fine sand

Cg3—36 to 80 inches; stratified sand

Component note: Similar inclusions are soils with a loamy sand surface and soils with a sand surface.**Minor Components****Calamus***Composition:* About 10 percent*Slope:* 0 to 2 percent*Drainage class:* Moderately well drained*Ecological site:* Shallow To Gravel - Veg. Zone 2*General Considerations:* This map unit is used as rangeland.**1940—Calamus coarse sand, 0 to 2 percent slopes, Rarely Flooded***Map Unit Composition*

Calamus: 90 percent

Minor components: 10 percent

*Component Descriptions***Calamus***MLRA:* 72 - Central High Tableland*Landform:* Bar on flood plain on river valley*Parent material:* Sandy alluvium*Slope:* 0 to 2 percent*Drainage class:* Moderately well drained*Slowest permeability:* Rapid (About 6.00 in/hr)*Available water capacity:* Low (About 3.4 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* Rare*Ponding hazard:* None*Depth to seasonal water saturation:* About 36 to 72 inches*Runoff class:* Negligible*Ecological site:* Shallow To Gravel - Veg. Zone 2*Land capability (irrigated):* 4s*Land capability (nonirrigated):* 6s*Typical Profile:*

A—0 to 5 inches; coarse sand

AC—5 to 11 inches; stratified sand

C1—11 to 30 inches; stratified sand

C2—30 to 52 inches; sand

C3—52 to 80 inches; coarse sand

Component note: Similar inclusions are Scoville that is higher on the landscape and does not have a water table, soils with a loamy sand surface and soils with a sand surface.**Minor Components****Bolent***Composition:* About 10 percent*Slope:* 0 to 2 percent*Drainage class:* Somewhat poorly drained*Ecological site:* Subirrigated - Veg. Zone 2*General Considerations:* This map unit is used as rangeland.**2140—Colfer sand, 0 to 3 percent slopes***Map Unit Composition*

Colfer: 90 percent

Minor components: 10 percent

*Component Descriptions***Colfer***MLRA:* 72 - Central High Tableland*Landform:* Interdune on sandhills*Parent material:* Eolian sands over lacustrine deposits*Slope:* 0 to 3 percent*Drainage class:* Somewhat excessively drained*Slowest permeability:* Moderately rapid (About 2.00 in/hr)*Available water capacity:* Low (About 5.3 inches)*Shrink-swell potential:* Low (About 1.5 LEP)*Flooding hazard:* None*Ponding hazard:* None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Negligible

Ecological site: Sandy - Veg. Zone 2

Land capability (irrigated): 4e

Land capability (nonirrigated): 6e

Typical Profile:

Ap—0 to 7 inches; sand

AC—7 to 24 inches; sand

C1—24 to 43 inches; loamy sand

C2—43 to 50 inches; loamy sand

2Bkb—50 to 54 inches; fine sandy loam

2C—54 to 80 inches; loamy sand

Component note: Similar inclusions are

Overlake that has calcareous loamy textures between 20 and 40 inches, soils with a loamy sand surface and soils with a fine sand surface.

Minor Components

Dailey

Composition: About 5 percent

Slope: 0 to 3 percent

Drainage class: Somewhat excessively drained

Ecological site: Sandy - Veg. Zone 2

Laird

Composition: About 5 percent

Slope: 0 to 3 percent

Drainage class: Well drained

Ecological site: Saline Subirrigated - Veg. Zone 2

General Considerations: This map unit is used as irrigated cropland and rangeland.

2250—Craft very fine sandy loam, 0 to 2 percent slopes, Rarely Flooded

Map Unit Composition

Craft: 95 percent

Minor components: 5 percent

Component Descriptions

Craft

MLRA: 72 - Central High Tableland

Landform: Flood plain on river valley

Parent material: Stratified, calcareous alluvium

Slope: 0 to 2 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: High (About 10.1 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: Rare

Ponding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Silty Lowland - Veg. Zone 2

Land capability (irrigated): 2e

Land capability (nonirrigated): 2c

Typical Profile:

Ap—0 to 6 inches; very fine sandy loam

C1—6 to 38 inches; very fine sandy loam

C2—38 to 80 inches; stratified very fine sandy loam

Component note: Similar inclusions are

Benkelman that is higher on the landscape, soils with a loam surface, soils with more sand throughout and soils with loamy sand below 40 inches.

Minor Components

Haigler

Composition: About 5 percent

Slope: 0 to 2 percent

Drainage class: Moderately well drained

Ecological site: Saline Lowland - Veg. Zone 2

General Considerations: This map unit is used as cropland.

2254—Craft very fine sandy loam, 0 to 2 percent slopes, Channeled, Frequently Flooded

Map Unit Composition

Craft: 95 percent

Minor components: 5 percent

Component Descriptions

Craft

MLRA: 72 - Central High Tableland

Landform: Channel on flood plain on river valley

Parent material: Stratified, calcareous alluvium

Slope: 0 to 2 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: High (About 10.1 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: Frequent

Ponding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Silty Overflow - Veg. Zone 2

Land capability (nonirrigated): 6w

Typical Profile:

Ap—0 to 3 inches; stratified very fine sandy loam

C1—3 to 27 inches; stratified very fine sandy loam

C2—27 to 80 inches; stratified very fine sandy loam

Component note: Similar inclusions are Benkelman that is higher on the landscape, soils with a loam surface, soils with more sand throughout and soils with loamy sand below 40 inches.

Minor Components

Bankard

Composition: About 5 percent

Slope: 0 to 2 percent

Drainage class: Somewhat excessively drained

Ecological site: No Site

General Considerations: This map unit is used as rangeland.

2394—Dailey loamy sand, 0 to 3 percent slopes

Map Unit Composition

Dailey: 85 percent

Minor components: 15 percent

Component Descriptions

Dailey

MLRA: 72 - Central High Tableland

Landform: Interdune on sandhills

Parent material: Eolian sands

Slope: 0 to 3 percent

Drainage class: Somewhat excessively drained

Slowest permeability: Rapid (About 6.00 in/hr)

Available water capacity: Low (About 4.2 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Ponding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Negligible

Ecological site: Sandy - Veg. Zone 2

Land capability (irrigated): 4e

Land capability (nonirrigated): 4e

Typical Profile:

A—0 to 7 inches; loamy sand

AC—7 to 15 inches; loamy sand

C—15 to 80 inches; sand

Component note: Similar inclusions are soils with a sand surface and soils with a loamy fine sand surface.

Minor Components

Overlake

Composition: About 10 percent

Slope: 0 to 3 percent

Drainage class: Well drained

Ecological site: Sandy - Veg. Zone 2

Jayem

Composition: About 5 percent

Slope: 0 to 3 percent

Drainage class: Well drained

Ecological site: Sandy - Veg. Zone 2

General Considerations: This map unit is mainly used as irrigated cropland.

2630—Duroc loam, 0 to 1 percent slopes

Map Unit Composition

Duroc: 98 percent

Minor components: 2 percent

Component Descriptions

Duroc

MLRA: 72 - Central High Tableland

Landform: Swale on tableland

Parent material: Loess

Slope: 0 to 1 percent

Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: High (About 11.4 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Ponding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Negligible

Ecological site: Silty Lowland - Veg. Zone 2

Land capability (irrigated): 1

Land capability (nonirrigated): 2c

Typical Profile:

Ap—0 to 7 inches; loam
 A—7 to 25 inches; loam
 Bw—25 to 33 inches; loam
 C—33 to 80 inches; loam

Component note: Similar inclusions are Blackwood that is higher on the landscape and soils with a thinner dark surface.

Minor Components**Lodgepole**

Composition: About 2 percent
Slope: 0 to 1 percent
Drainage class: Somewhat poorly drained
Ecological site: Clayey Overflow - Veg. Zone 2

General Considerations: This map unit is mainly used as cropland.

3280—Haigler very fine sandy loam, 0 to 2 percent slopes, Rarely Flooded

Map Unit Composition

Haigler: 90 percent
 Minor components: 10 percent

Component Descriptions

Haigler

MLRA: 72 - Central High Tableland
Landform: Flood plain on river valley
Parent material: Sandy alluvium and loamy alluvium
Slope: 0 to 2 percent
Drainage class: Moderately well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Moderate (About 6.6 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: Rare
Ponding hazard: None
Depth to seasonal water saturation: About 36 to 72 inches
Runoff class: Low
Ecological site: Saline Lowland - Veg. Zone 2
Land capability (irrigated): 4s
Land capability (nonirrigated): 4s

Typical Profile:

A—0 to 5 inches; very fine sandy loam
 AC1—5 to 10 inches; very fine sandy loam
 AC2—10 to 16 inches; loam

C1—16 to 27 inches; stratified loamy fine sand

C2—27 to 43 inches; stratified loamy very fine sand

C3—43 to 80 inches; fine sand

Component note: Similar inclusions are soils that have a loam surface.

Minor Components**Otero**

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Sandy Lowland - Veg. Zone 2

Sanborn

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Ecological site: Saline Subirrigated - Veg. Zone 2

General Considerations: This map unit is used as rangeland and hayland.
 The limitations are flooding, a high water table and sodium in the underlying layers.

4042—Jayem loamy sand, 0 to 3 percent slopes

Map Unit Composition

Jayem: 90 percent
 Minor components: 10 percent

Component Descriptions

Jayem

MLRA: 72 - Central High Tableland
Landform: Interdune on sandhills
Parent material: Sandy and silty eolian deposits
Slope: 0 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Moderate (About 8.7 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Sandy - Veg. Zone 2
Land capability (irrigated): 3e
Land capability (nonirrigated): 4e

Typical Profile:

Ap—0 to 5 inches; loamy sand
 A—5 to 14 inches; fine sandy loam
 Bw—14 to 29 inches; fine sandy loam
 C—29 to 80 inches; fine sandy loam

Component note: Similar inclusions are soils with a light-colored surface, soils with a fine sandy loam surface and soils with a sand surface.

Minor Components**Valent**

Composition: About 10 percent
Slope: 0 to 3 percent
Drainage class: Excessively drained
Ecological site: Sandy - Veg. Zone 2

General Considerations: This map unit is mainly used as irrigated cropland.

4140—Kanorado silty clay loam, 6 to 9 percent slopes

Map Unit Composition

Kanorado: 95 percent
 Minor components: 5 percent

Component Descriptions

Kanorado

MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Parent material: Loess over residuum weathered from calcareous shale
Slope: 6 to 9 percent
Depth to restrictive feature: 40 to 60 inches to bedrock (paralithic)
Drainage class: Well drained
Slowest permeability: Very slow (About 0.01 in/hr)
Available water capacity: Moderate (About 8.2 inches)
Shrink-swell potential: High (About 7.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very high
Ecological site: Clayey - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:

Ap—0 to 6 inches; silty clay loam

A—6 to 11 inches; silty clay loam
 Bw1—11 to 16 inches; silty clay loam
 Bw2—16 to 24 inches; silty clay
 BCk—24 to 36 inches; silty clay loam
 2C—36 to 44 inches; silty clay loam
 2Cr—44 to 80 inches; weathered bedrock

Component note: Similar inclusions are soils with a loam surface and soils with shale at depths greater than 60 inches.

Minor Components**Sulco**

Composition: About 5 percent
Slope: 6 to 9 percent
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

General Considerations: This map unit is used as cropland and rangeland.

4380—Laird fine sandy loam, 0 to 2 percent slopes

Map Unit Composition

Laird: 90 percent
 Minor components: 10 percent

Component Descriptions

Laird

MLRA: 72 - Central High Tableland
Landform: Interdune on sandhills
Parent material: Eolian deposits over lacustrine deposits
Slope: 0 to 2 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.0 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Saline Lowland - Veg. Zone 2
Land capability (irrigated): 4s
Land capability (nonirrigated): 4s

Typical Profile:

A—0 to 7 inches; fine sandy loam
 AB—7 to 10 inches; fine sandy loam
 Bw—10 to 16 inches; fine sandy loam
 Bk1—16 to 28 inches; fine sandy loam
 Bk2—28 to 36 inches; fine sandy loam

Bk3—36 to 45 inches; loam
 Bk4—45 to 55 inches; sandy clay loam
 C—55 to 80 inches; loam

Component note: Similar inclusions are soils with a loamy sand surface and soils with a light-colored surface.

Minor Components

Overlake

Composition: About 10 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

General Considerations: This map unit is used as irrigated cropland and rangeland.

4665—Lodgepole silty clay loam, Occasionally Ponded, 0 to 1 percent slopes

Map Unit Composition

Lodgepole: 95 percent
 Minor components: 5 percent

Component Descriptions

Lodgepole

MLRA: 72 - Central High Tableland

Landform: Playa on tableland

Parent material: Loess

Slope: 0 to 1 percent

Drainage class: Somewhat poorly drained

Slowest permeability: Very slow (About 0.01 in/hr)

Available water capacity: High (About 9.5 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Ponding hazard: Occasional

Depth to seasonal water saturation: About 0 to 0 inches

Runoff class: Negligible

Ecological site: Clayey Overflow - Veg. Zone 2

Land capability (irrigated): 4w

Land capability (nonirrigated): 3w

Typical Profile:

A—0 to 5 inches; silty clay loam
 Bt1—5 to 9 inches; silty clay
 Bt2—9 to 24 inches; silty clay
 Bt3—24 to 38 inches; silty clay
 Bt4—38 to 45 inches; silty clay loam
 BC—45 to 54 inches; silty clay loam
 C—54 to 80 inches; silt loam

Component note: Similar inclusions are soils with a silt loam surface and soils with a silty clay surface.

Minor Components

Duroc

Composition: About 5 percent

Slope: 0 to 1 percent

Drainage class: Well drained

Ecological site: Silty Lowland - Veg. Zone 2

General Considerations: This map unit is mainly used as cropland.

4667—Lodgepole silty clay loam, Frequently Ponded, 0 to 1 percent slopes

Map Unit Composition

Lodgepole: 95 percent
 Minor components: 5 percent

Component Descriptions

Lodgepole

MLRA: 72 - Central High Tableland

Landform: Playa on tableland

Parent material: Loess

Slope: 0 to 1 percent

Drainage class: Poorly drained

Slowest permeability: Very slow (About 0.01 in/hr)

Available water capacity: High (About 10.6 inches)

Shrink-swell potential: High (About 7.5 LEP)

Flooding hazard: None

Ponding hazard: Frequent

Depth to seasonal water saturation: About 0 to 0 inches

Runoff class: Negligible

Ecological site: No Site

Land capability (nonirrigated): 5w

Typical Profile:

A—0 to 5 inches; silty clay loam
 Bt1—5 to 14 inches; silty clay
 Bt2—14 to 36 inches; silty clay
 Bt3—36 to 45 inches; silty clay loam
 BC—45 to 50 inches; silty clay loam
 C—50 to 80 inches; silt loam

Component note: Similar inclusions are soils with a silt loam surface and soils with a silty clay surface.

Minor Components

Duroc

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Silty Lowland - Veg. Zone 2

General Considerations: This map unit is mainly used as cropland.

5949—Otero fine sandy loam, 0 to 2 percent slopes

Map Unit Composition

Otero: 90 percent
 Minor components: 10 percent

Component Descriptions

Otero
MLRA: 72 - Central High Tableland
Landform: Stream terrace on river valley
Parent material: Alluvium
Slope: 0 to 1 percent
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Moderate (About 8.4 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Sandy - Veg. Zone 2
Land capability (irrigated): 2e
Land capability (nonirrigated): 3e

Typical Profile:

A—0 to 7 inches; fine sandy loam
 C1—7 to 55 inches; fine sandy loam
 C2—55 to 80 inches; sandy loam

Component note: Similar inclusions are soils that have a thicker dark surface.

Minor Components

Benkelman

Composition: About 5 percent
Slope: 0 to 1 percent
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

Scoville

Composition: About 5 percent
Slope: 0 to 1 percent

Drainage class: Somewhat excessively drained

Ecological site: Sandy - Veg. Zone 2

General Considerations: This map unit is used mainly as irrigated cropland.

5975—Overlake sand, 0 to 3 percent slopes

Map Unit Composition

Overlake: 90 percent
 Minor components: 10 percent

Component Descriptions

Overlake
MLRA: 72 - Central High Tableland
Landform: Interdune on sandhills
Parent material: Eolian sands over calcareous loamy lacustrine deposits
Slope: 0 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Moderate (About 6.6 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Sandy - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 6e

Typical Profile:

A—0 to 6 inches; sand
 C—6 to 31 inches; sand
 2Bk—31 to 45 inches; very fine sandy loam
 2C—45 to 80 inches; fine sandy loam

Component note: Similar inclusions are soils with a loamy sand surface and soils with a thicker dark surface.

Minor Components

Dailey

Composition: About 5 percent
Slope: 0 to 3 percent
Drainage class: Somewhat excessively drained
Ecological site: Sandy - Veg. Zone 2

Laird

Composition: About 5 percent

Slope: 0 to 3 percent
Drainage class: Well drained
Ecological site: Saline Lowland - Veg. Zone 2

General Considerations: This map unit is used mainly as irrigated cropland.

6091—Pits, sand And Gravel

Map Unit Composition

Pits: 100 percent

Component Descriptions

Pits

MLRA: 72 - Central High Tableland

Landform: Flood plain on river valley

Parent material: Sandy and gravelly alluvium

Slope: 0 to 30 percent

Drainage class: Excessively drained

Slowest permeability: Very rapid (About 20.00 in/hr)

Available water capacity: Very low (About 1.8 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Ponding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Negligible

Ecological site: No Site - Veg. Zone 2

Land capability (nonirrigated): 8s

General Considerations: This map unit is mainly areas of spoil from mineing sand and gravel.

6570—Sanborn loam, 0 to 2 percent slopes, Rarely Flooded

Map Unit Composition

Sanborn: 90 percent

Minor components: 10 percent

Component Descriptions

Sanborn

MLRA: 72 - Central High Tableland

Landform: Flood plain on river valley

Parent material: Calcareous stratified loamy and/or sandy alluvium

Slope: 0 to 2 percent
Drainage class: Somewhat poorly drained
Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: Moderate (About 8.5 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: Rare

Ponding hazard: None

Depth to seasonal water saturation: About 18 to 36 inches

Runoff class: Low

Ecological site: Saline Subirrigated - Veg. Zone 2

Land capability (nonirrigated): 6s

Typical Profile:

A—0 to 5 inches; loam

AC—5 to 10 inches; loam

Cg1—10 to 25 inches; stratified loam

Cg2—25 to 40 inches; very fine sandy loam

Cg3—40 to 50 inches; sand

Cg4—50 to 80 inches; sand

Component note: Similar inclusions are soils with a very fine sand surface and soils with a loam surface.

Minor Components

Almeria

Composition: About 5 percent

Slope: 0 to 2 percent

Drainage class: Poorly drained

Ecological site: Wet Land - Veg. Zone 2

Haigler

Composition: About 5 percent

Slope: 0 to 2 percent

Drainage class: Moderately well drained

Ecological site: Saline Lowland - Veg. Zone 2

General Considerations: This map unit is used mainly as rangeland and hayland.

6632—Sarben loamy sand, 0 to 3 percent slopes

Map Unit Composition

Sarben: 85 percent

Minor components: 15 percent

Component Descriptions

Sarben

MLRA: 72 - Central High Tableland

Landform: Interdune on sandhills

Parent material: Sandy and loamy eolian deposits
Slope: 0 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Moderate (About 7.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Sandy - Veg. Zone 2
Land capability (irrigated): 3e
Land capability (nonirrigated): 4e

Typical Profile:

A—0 to 6 inches; loamy sand
 AC—6 to 16 inches; fine sandy loam
 C1—16 to 30 inches; fine sandy loam
 C2—30 to 48 inches; fine sandy loam
 C3—48 to 80 inches; fine sandy loam

Component note: Similar inclusions are soils with a sandy loam surface.

Minor Components

Valent

Composition: About 10 percent
Slope: 0 to 3 percent
Drainage class: Excessively drained
Ecological site: Sandy - Veg. Zone 2

Jayem

Composition: About 5 percent
Slope: 0 to 3 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

General Considerations: This map unit used as cropland and rangeland.

6633—Sarben loamy sand, 3 to 6 percent slopes

Map Unit Composition

Sarben: 85 percent
 Minor components: 15 percent

Component Descriptions

Sarben
MLRA: 72 - Central High Tableland
Landform: Interdune on sandhills

Parent material: Sandy and loamy eolian deposits
Slope: 3 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Moderate (About 7.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Sandy - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:

A—0 to 6 inches; loamy sand
 AC—6 to 16 inches; fine sandy loam
 C1—16 to 38 inches; fine sandy loam
 C2—38 to 63 inches; fine sandy loam
 C3—63 to 80 inches; loamy sand

Component note: Similar inclusions are soils with a sandy loam surface.

Minor Components

Valent

Composition: About 10 percent
Slope: 3 to 6 percent
Drainage class: Excessively drained
Ecological site: Sandy - Veg. Zone 2

Sulco

Composition: About 5 percent
Slope: 3 to 6 percent
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

General Considerations: This map unit is used mainly as rangeland.

6634—Sarben loamy sand, 6 to 9 percent slopes

Map Unit Composition

Sarben: 85 percent
 Minor components: 15 percent

Component Descriptions

Sarben
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland

Parent material: Sandy and loamy eolian deposits
Slope: 6 to 9 percent
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Moderate (About 8.3 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Sandy - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 6e

Typical Profile:

A—0 to 6 inches; loamy sand
 AC—6 to 16 inches; fine sandy loam
 C1—16 to 34 inches; fine sandy loam
 C2—34 to 53 inches; fine sandy loam
 C3—53 to 80 inches; fine sandy loam

Component note: Similar inclusions are soils with a sandy loam surface.

Minor Components

Valent

Composition: About 10 percent
Slope: 6 to 9 percent
Drainage class: Excessively drained
Ecological site: Sandy - Veg. Zone 2

Sulco

Composition: About 5 percent
Slope: 6 to 9 percent
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

General Considerations: This map unit is mainly used as rangeland.

6635—Sarben loamy sand, 9 to 30 percent slopes

Map Unit Composition

Sarben: 85 percent
 Minor components: 15 percent

Component Descriptions

Sarben
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland

Parent material: Sandy and loamy eolian deposits
Slope: 9 to 30 percent
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Moderate (About 6.3 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Sandy - Veg. Zone 2
Land capability (nonirrigated): 6e

Typical Profile:

A—0 to 6 inches; loamy sand
 AC—6 to 11 inches; loamy sand
 C1—11 to 17 inches; fine sandy loam
 C2—17 to 38 inches; fine sandy loam
 C3—38 to 48 inches; fine sand
 C4—48 to 80 inches; fine sand

Component note: Similar inclusions are soils with a sandy loam surface.

Minor Components

Valent

Composition: About 10 percent
Slope: 9 to 30 percent
Drainage class: Excessively drained
Ecological site: Sandy - Veg. Zone 2

Sulco

Composition: About 5 percent
Slope: 9 to 30 percent
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

General Considerations: This map unit is mainly used as rangeland.

6700—Satanta fine sandy loam, 0 to 2 percent slopes

Map Unit Composition

Satanta: 85 percent
 Minor components: 15 percent
 Component Descriptions
 Satanta
MLRA: 72 - Central High Tableland
Landform: Interdune on sandhills
Parent material: Loamy eolian deposits
Slope: 0 to 2 percent

Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.4 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 2e
Land capability (nonirrigated): 2e

Typical Profile:

Ap—0 to 6 inches; fine sandy loam
 A—6 to 16 inches; loam
 Bt1—16 to 24 inches; loam
 Bt2—24 to 29 inches; loam
 BCk—29 to 46 inches; loam
 C—46 to 80 inches; very fine sandy loam

Component note: Similar inclusions are soils with a loamy fine sand surface, soils with a thicker dark surface and soils with more sand throughout.

Minor Components

Sarben

Composition: About 10 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

Ulysses

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

General Considerations: This map unit is mainly used as cropland.

6820—Scoville loamy sand, Calcareous, 1 to 3 percent slopes

Map Unit Composition

Scoville: 90 percent
 Minor components: 10 percent

Component Descriptions

Scoville
MLRA: 72 - Central High Tableland
Landform: Stream terrace on river valley

Parent material: Sandy eolian deposits over loamy alluvium
Slope: 1 to 3 percent
Drainage class: Somewhat excessively drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: Low (About 5.7 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Sandy - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:

Ap—0 to 7 inches; loamy sand
 C1—7 to 39 inches; sand
 C2—39 to 44 inches; loamy sand
 2Ab—44 to 57 inches; very fine sandy loam
 2Bb—57 to 70 inches; very fine sandy loam
 2BCb—70 to 80 inches; very fine sandy loam

Component note: Similar inclusions are soils that are sandy throughout and soils with no lime in the surface.

Minor Components

Otero

Composition: About 10 percent
Slope: 1 to 3 percent
Drainage class: Well drained
Ecological site: Sandy Lowland - Veg. Zone 2

General Considerations: This map unit is mainly used as irrigated cropland.

7090—Sulco fine sandy loam, 3 to 6 percent slopes

Map Unit Composition

Sulco: 85 percent
 Minor components: 15 percent

Component Descriptions

Sulco
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Parent material: Loess
Slope: 3 to 6 percent
Drainage class: Well drained

Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.3 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Limy Upland - Veg. Zone 2
Land capability (irrigated): 3e
Land capability (nonirrigated): 4e

Typical Profile:

A—0 to 6 inches; fine sandy loam
 Bw—6 to 9 inches; loam
 Bk—9 to 24 inches; loam
 C—24 to 80 inches; very fine sandy loam

Component note: Similar inclusions are soils with a very fine sandy loam surface.

Minor Components

Ulysses

Composition: About 10 percent
Slope: 3 to 6 percent
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

Sarben

Composition: About 5 percent
Slope: 3 to 6 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

General Considerations: This map unit is mainly used as cropland.

7096—Sulco loam, 3 to 6 percent slopes

Map Unit Composition

Sulco: 95 percent
 Minor components: 5 percent

Component Descriptions

Sulco
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Parent material: Loess
Slope: 3 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)

Available water capacity: High (About 10.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Limy Upland - Veg. Zone 2
Land capability (irrigated): 3e
Land capability (nonirrigated): 4e

Typical Profile:

A—0 to 6 inches; loam
 Bk—6 to 17 inches; loam
 C—17 to 80 inches; loam

Component note: Similar inclusions are soils with a very fine sandy loam surface.

Minor Components

Ulysses

Composition: About 5 percent
Slope: 3 to 6 percent
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

General Considerations: This map unit is mainly used as cropland.

7098—Sulco loam, 6 to 9 percent slopes

Map Unit Composition

Sulco: 95 percent
 Minor components: 5 percent

Component Descriptions

Sulco
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Parent material: Loess
Slope: 6 to 9 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.7 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Limy Upland - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 4e

Typical Profile:

A—0 to 4 inches; loam
 Bk—4 to 13 inches; loam
 C—13 to 80 inches; loam

Component note: Similar inclusions are soils with a very fine sandy loam surface.

Minor Components**Ulysses**

Composition: About 5 percent
Slope: 6 to 9 percent
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

General Considerations: This map unit is used as cropland and rangeland.

7100—Sulco loam, 9 to 30 percent slopes

Map Unit Composition

Sulco: 85 percent
 Minor components: 15 percent

Component Descriptions

Sulco

MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Parent material: Loess
Slope: 9 to 30 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.8 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Limy Upland - Veg. Zone 2
Land capability (nonirrigated): 6e

Typical Profile:

A—0 to 3 inches; loam
 Bw—3 to 6 inches; loam
 Bk1—6 to 16 inches; loam
 Bk2—16 to 27 inches; loam
 C—27 to 80 inches; loam

Component note: Similar inclusions are soils with a very fine sandy loam surface.

Minor Components**Ulysses**

Composition: About 10 percent
Slope: 6 to 9 percent
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

Craft

Composition: About 5 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Silty Lowland - Veg. Zone 2

General Considerations: This map unit is used as rangeland.

7102—Sulco complex, 9 to 60 percent slopes

Map Unit Composition

Sulco: 70 percent
 Sulco: 20 percent
 Minor components: 10 percent

Component Descriptions

Sulco

MLRA: 72 - Central High Tableland
Landform: Hillslope on canyon on upland
Parent material: Loess
Slope: 30 to 60 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.2 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Limy Upland - Veg. Zone 2
Land capability (nonirrigated): 7e

Typical Profile:

A—0 to 5 inches; loam
 Bk—5 to 20 inches; loam
 C—20 to 80 inches; loam

Component note: Similar inclusions are soils with a very fine sandy loam surface.

Sulco

MLRA: 72 - Central High Tableland
Landform: Hillslope on canyon on upland
Parent material: Loess
Slope: 9 to 30 percent

Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.7 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: High
Ecological site: Limy Upland - Veg. Zone 2
Land capability (nonirrigated): 6e

Typical Profile:

A—0 to 3 inches; loam
 Bw—3 to 6 inches; loam
 Bk1—6 to 16 inches; loam
 Bk2—16 to 27 inches; loam
 C—27 to 80 inches; loam

Component note: Similar inclusions: Soils with a very fine sandy loam surface

Minor Components

Craft

Composition: About 10 percent
Slope: 0 to 2 percent
Drainage class: Well drained
Ecological site: Silty Lowland - Veg. Zone 2

General Considerations: This map unit is used as rangeland.

7152—Tassel-Ashollow-Rock outcrop complex, 9 to 60 percent slopes

Map Unit Composition

Tassel: 50 percent
 Ashollow: 25 percent
 Rock outcrop: 25 percent

Component Descriptions

Tassel

MLRA: 72 - Central High Tableland
Landform: Hillslope on canyon on upland
Parent material: Residuum weathered from calcareous sandstone
Slope: 30 to 60 percent
Depth to restrictive feature: 6 to 20 inches to bedrock (paralithic)
Drainage class: Well drained

Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Very low (About 1.3 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very high
Ecological site: Shallow Limy - Veg. Zone 2
Land capability (nonirrigated): 7s

Typical Profile:

A—0 to 4 inches; sandy loam
 C—4 to 9 inches; sandy loam
 Cr—9 to 80 inches; weathered bedrock

Ashollow

MLRA: 72 - Central High Tableland
Landform: Hillslope on canyon on upland
Parent material: Loamy residuum weathered from calcareous sandstone
Slope: 9 to 30 percent
Drainage class: Well drained
Slowest permeability: Moderately rapid (About 2.00 in/hr)
Available water capacity: Moderate (About 7.6 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Medium
Ecological site: Sandy - Veg. Zone 2
Land capability (nonirrigated): 6e

Typical Profile:

A—0 to 6 inches; fine sandy loam
 AC—6 to 11 inches; fine sandy loam
 C1—11 to 36 inches; fine sandy loam
 C2—36 to 80 inches; fine sandy loam

Rock outcrop

MLRA: 72 - Central High Tableland
Landform: Ledge on canyon on upland
Parent material: Calcareous sandstone
Slope: 30 to 60 percent
Depth to restrictive feature: 0 inches to bedrock (paralithic)
Drainage class: Excessively drained
Available water capacity: Very low (About 0.0 inches)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet

Runoff class: Very high
Ecological site: No Site - Veg. Zone 2
Land capability (nonirrigated): 8s

General Considerations: This map unit is used as rangeland.

7461—Ulysses loam, 1 to 3 percent slopes

Map Unit Composition

Ulysses: 95 percent
 Minor components: 5 percent

Component Descriptions

Ulysses
MLRA: 72 - Central High Tableland
Landform: Plain on tableland
Parent material: Calcareous loess
Slope: 1 to 3 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 10.9 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 2e
Land capability (nonirrigated): 2e

Typical Profile:

Ap—0 to 5 inches; loam
 A—5 to 9 inches; loam
 Bw—9 to 15 inches; loam
 BC—15 to 23 inches; loam
 C1—23 to 48 inches; loam
 C2—48 to 80 inches; very fine sandy loam

Component note: Similar inclusions are Blackwood that has a thicker dark surface.

Minor Components

Duroc

Composition: About 5 percent
Slope: 1 to 3 percent
Drainage class: Well drained
Ecological site: Silty Lowland - Veg. Zone 2

General Considerations: This map unit is used as cropland.

7462—Ulysses loam, 3 to 6 percent slopes

Map Unit Composition

Ulysses: 90 percent
 Minor components: 10 percent

Component Descriptions

Ulysses
MLRA: 72 - Central High Tableland
Landform: Hillslope on upland
Parent material: Calcareous loess
Slope: 3 to 6 percent
Drainage class: Well drained
Slowest permeability: Moderate (About 0.60 in/hr)
Available water capacity: High (About 11.0 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Silty - Veg. Zone 2
Land capability (irrigated): 3e
Land capability (nonirrigated): 3e

Typical Profile:

Ap—0 to 5 inches; loam
 A—5 to 12 inches; loam
 Bw—12 to 24 inches; loam
 C1—24 to 44 inches; loam
 C2—44 to 60 inches; loam

Component note: Similar inclusions are Blackwood that has a thicker dark surface.

Minor Components

Sulco

Composition: About 10 percent
Slope: 3 to 6 percent
Drainage class: Well drained
Ecological site: Silty - Veg. Zone 2

General Considerations: This map unit is used as cropland.

7602—Valent loamy sand, 3 to 9 percent slopes

Map Unit Composition

Valent: 90 percent
Minor components: 10 percent

Component Descriptions

Valent
MLRA: 72 - Central High Tableland
Landform: Dune on sandhills
Parent material: Eolian sands
Slope: 3 to 9 percent
Drainage class: Excessively drained
Slowest permeability: Rapid (About 6.00 in/hr)
Available water capacity: Low (About 3.9 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Sandy - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 6e

Typical Profile:

A—0 to 5 inches; loamy sand
AC—5 to 9 inches; sand
C—9 to 80 inches; sand

Component note: Similar inclusions are soils with a sand surface.

Minor Components

Dailey

Composition: About 5 percent
Slope: 0 to 3 percent
Drainage class: Somewhat excessively drained
Ecological site: Sandy - Veg. Zone 2

Sarben

Composition: About 5 percent
Slope: 3 to 9 percent
Drainage class: Well drained
Ecological site: Sandy - Veg. Zone 2

General Considerations: This map unit is mainly used as rangeland.

7610—Valent sand, 0 to 3 percent slopes

Map Unit Composition

Valent: 90 percent
Minor components: 10 percent

Component Descriptions

Valent
MLRA: 72 - Central High Tableland
Landform: Interdune on sandhills
Parent material: Eolian sands
Slope: 0 to 3 percent
Drainage class: Excessively drained
Slowest permeability: Rapid (About 6.00 in/hr)
Available water capacity: Low (About 3.7 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Negligible
Ecological site: Sandy - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 6e

Typical Profile:

A—0 to 7 inches; sand
AC—7 to 10 inches; sand
C—10 to 60 inches; sand

Component note: Similar inclusions are soils with a loamy sand surface and soils with a fine sand surface.

Minor Components

Dailey

Composition: About 10 percent
Slope: 0 to 3 percent
Drainage class: Somewhat excessively drained
Ecological site: Sandy - Veg. Zone 2

General Considerations: This map unit is used as irrigated cropland and rangeland.

7612—Valent sand, 3 to 9 percent slopes

Map Unit Composition

Valent: 95 percent
Minor components: 5 percent

Component Descriptions

Valent
MLRA: 72 - Central High Tableland
Landform: Dune on sandhills
Parent material: Eolian sands
Slope: 3 to 9 percent
Drainage class: Excessively drained
Slowest permeability: Rapid (About 6.00 in/hr)
Available water capacity: Low (About 3.7 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None

Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Very low
Ecological site: Sands - Veg. Zone 2
Land capability (irrigated): 4e
Land capability (nonirrigated): 6e

Typical Profile:

A—0 to 4 inches; sand
 AC—4 to 9 inches; sand
 C—9 to 80 inches; sand

Component note: Similar inclusions are soils with a loamy sand surface and soils with a fine sand surface.

Minor Components

Dailey

Composition: About 5 percent
Slope: 0 to 3 percent
Drainage class: Somewhat excessively drained
Ecological site: Sandy - Veg. Zone 2

General Considerations: This map unit is used as irrigated cropland and rangeland.

7616—Valent sand, Rolling

Map Unit Composition

Valent: 90 percent
 Minor components: 10 percent

Component Descriptions

Valent

MLRA: 72 - Central High Tableland
Landform: Dune on sandhills
Parent material: Eolian sands
Slope: 9 to 24 percent
Drainage class: Excessively drained
Slowest permeability: Rapid (About 6.00 in/hr)
Available water capacity: Low (About 3.7 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Sands - Veg. Zone 2
Land capability (nonirrigated): 6e

Typical Profile:

A—0 to 5 inches; sand
 AC—5 to 9 inches; sand
 C—9 to 80 inches; sand

Component note: Similar inclusions are soils with a loamy sand surface and soil with a fine sand surface.

Minor Components

Valent

Composition: About 10 percent
Slope: 3 to 9 percent
Drainage class: Excessively drained
Ecological site: Sandy - Veg. Zone 2

General Considerations: This map unit is used as rangeland.

7618—Valent complex, Rolling And Hilly

Map Unit Composition

Valent: 55 percent
 Valent: 35 percent
 Minor components: 10 percent

Component Descriptions

Valent

MLRA: 72 - Central High Tableland
Landform: Dune on sandhills
Parent material: Eolian sands
Slope: 24 to 60 percent
Drainage class: Excessively drained
Slowest permeability: Rapid (About 6.00 in/hr)
Available water capacity: Low (About 3.6 inches)
Shrink-swell potential: Low (About 1.5 LEP)
Flooding hazard: None
Ponding hazard: None
Depth to seasonal water saturation: More than 6 feet
Runoff class: Low
Ecological site: Sands - Veg. Zone 2
Land capability (nonirrigated): 7e

Typical Profile:

A—0 to 3 inches; sand
 C—3 to 60 inches; sand

Component note: Similar inclusions are soils with a loamy sand surface and soils with a fine sand surface.

Valent

MLRA: 72 - Central High Tableland
Landform: Dune on sandhills
Parent material: Eolian sands
Slope: 9 to 24 percent
Drainage class: Excessively drained
Slowest permeability: Rapid (About 6.00 in/hr)

Available water capacity: Low (About 3.6 inches)

Shrink-swell potential: Low (About 1.5 LEP)

Flooding hazard: None

Ponding hazard: None

Depth to seasonal water saturation: More than 6 feet

Runoff class: Low

Ecological site: Choppy-Sands - Veg. Zone 2

Land capability (nonirrigated): 6e

Typical Profile:

A—0 to 3 inches; sand

C—3 to 60 inches; sand

Component note: Similar inclusions are soils with a loamy sand surface and soils with a fine sand surface.

Minor Components

Valent

Composition: About 10 percent

Slope: 3 to 9 percent

Drainage class: Excessively drained

Ecological site: Sandy - Veg. Zone 2

General Considerations: This map unit is used as rangeland.

9999a—Water Areas Greater Than 40 Acres

Map Unit Composition

Water: 100 percent

Component Descriptions

Water

MLRA: 72 - Central High Tableland

Depth to seasonal water saturation: More than 6 feet

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive land-forming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for forestland, or for engineering purposes. In the capability system, soils are generally grouped at three levels: capability class, subclass, and unit.

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

(Class 1) soils have slight limitations that restrict their use.

(Class 2) soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

(Class 3) soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

(Class 4) soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

(Class 5) soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

(Class 6) soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, rangeland, forestland, or wildlife habitat.

(Class 7) soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

(Class 8) soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, e, w, s, or c, to the class numeral, for example, 2e. The letter e shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, droughty, or stony; and c, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by w, s, or c because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, forestland, wildlife habitat, or recreation.

Capability units are soil groups within a subclass. The soils in a capability unit are enough alike to be suited to the same crops and pasture plants, to require similar management, and to have similar productivity. Capability units are generally designated by adding an Arabic numeral to the subclass symbol, for example, 2e-4 and 3e-6. These units are not given in all soil surveys.

The capability classification of map units in this survey area is given in the section "Detailed Soil Map Units" and in the Land Capability and Component Yields table.

Crop Yield Estimates

The average yields per acre that can be expected of the principal crops under a high level of management are shown in "Land Capability and Component Yields" table. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in the table.

The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, animal waste manure, and green manure crops; and harvesting that ensures the smallest possible loss.

For yields of irrigated crops, it is assumed that the irrigation system is adapted to the soils and to the crops grown, that good-quality irrigation water is uniformly applied as needed, and that tillage is kept to a minimum.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in this table, are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service (NRCS) or the Cooperative Extension Service (CES) can provide information about the management and productivity of the soils for those crops.

LAND CAPABILITY AND YIELDS PER ACRE OF CROPS--Continued
Dundy County, Nebraska

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(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land Capability		Dry beans		Corn		Winter wheat-fallow	
	N	I	N	I	N	I	N	I
1331: BANKARD-----	6w	4w	---	---	---	---	---	---
1465: BENKELMAN-----	2c	2e	---	---	42.00	148.00	40.00	---
1500: BLACKWOOD-----	2c	1	---	---	48.00	165.00	50.00	---
1502: BLACKWOOD-----	2e	2e	---	---	46.00	160.00	48.00	---
1524: BLANCHE-----	4e	4e	---	---	24.00	110.00	28.00	---
1526: BLANCHE-----	6e	4e	---	---	22.00	95.00	26.00	---
1700: BOLENT-----	6w	---	---	---	---	---	---	---
ALMERIA-----	6w	---	---	---	---	---	---	---
1940: CALAMUS-----	6s	4s	---	---	---	90.00	23.00	---
2140: COLFER-----	6e	4e	---	---	---	90.00	23.00	---
2250: CRAFT-----	2c	2e	---	---	---	146.00	36.00	---
2254: CRAFT-----	6w	---	---	---	---	---	---	---
2394: DAILEY-----	4e	4e	---	---	---	110.00	25.00	---
2630: DUROC-----	2c	1	---	---	48.00	168.00	55.00	---
3280: HAIGLER-----	4s	4s	---	---	32.00	110.00	28.00	---
4042: JAYEM-----	4e	3e	---	---	30.00	125.00	32.00	---
4140: KANORADO-----	4e	4e	---	---	40.00	125.00	30.00	---
4380: LAIRD-----	4s	4s	---	---	30.00	120.00	28.00	---
4665: LODGEPOLE-----	3w	4w	---	---	---	120.00	28.00	---
4667: LODGEPOLE-----	5w	---	---	---	---	---	---	---
5949: OTERO-----	3e	2e	---	---	33.00	120.00	30.00	---
5975: OVERLAKE-----	6e	4e	---	---	22.00	95.00	22.00	---
6091: PITS-----	8s	---	---	---	---	---	---	---
6570: SANBORN-----	6s	---	---	---	---	---	---	---
6632: SARBEN-----	4e	3e	---	---	28.00	120.00	30.00	---
6633: SARBEN-----	4e	4e	---	---	26.00	115.00	29.00	---
6634: SARBEN-----	6e	4e	---	---	24.00	110.00	27.00	---

LAND CAPABILITY AND YIELDS PER ACRE OF CROPS--Continued
Dundy County, Nebraska

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(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land Capability		Dry beans		Corn		Winter wheat-fallow	
	N	I	N	I	N	I	N	I
6635: SARBEN-----	6e	---	---	---	---	---	---	---
6700: SATANTA-----	2e	2e	---	---	38.00	146.00	33.00	---
6820: SCOVILLE-----	4e	4e	---	---	---	95.00	20.00	---
7090: SULCO-----	4e	3e	---	---	38.00	135.00	35.00	---
7096: SULCO-----	4e	3e	---	---	40.00	140.00	36.00	---
7098: SULCO-----	4e	4e	---	---	35.00	125.00	30.00	---
7100: SULCO-----	6e	---	---	---	---	---	---	---
7102: SULCO-----	7e	---	---	---	---	---	---	---
SULCO-----	6e	---	---	---	---	---	---	---
7152: TASSEL-----	7s	---	---	---	---	---	---	---
ASHOLLOW-----	6e	---	---	---	---	---	---	---
ROCK OUTCROP----	8s	---	---	---	---	---	---	---
7461: ULYSSES-----	2e	2e	---	---	46.00	160.00	48.00	---
7462: ULYSSES-----	3e	3e	---	---	44.00	155.00	46.00	---
7602: VALENT-----	6e	4e	---	---	---	93.00	---	---
7610: VALENT-----	6e	4e	---	---	---	95.00	---	---
7612: VALENT-----	6e	4e	---	---	---	90.00	---	---
7616: VALENT-----	6e	---	---	---	---	---	---	---
7618: VALENT-----	7e	---	---	---	---	---	---	---
VALENT-----	6e	---	---	---	---	---	---	---
9999a: WATER-----	---	---	---	---	---	---	---	---

Prime farmland is one of several kinds of important farmland defined by the U.S. Department of Agriculture. It is of major importance in meeting the Nation's short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil qualities, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. It is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

A recent trend in land use in some parts of the survey area has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

The map units in the survey area that are considered prime farmland are listed in the following table. This list does not constitute a recommendation for a particular land use. On some soils included in the list, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures. The extent of each listed map unit is shown in the "Acres and Proportionate Extent of Soils" table. The location is shown on the detailed soil maps. The soil qualities that affect use and management are described in other tables in this document."

Map symbol	Mapunit name	Farmland Classification
1465	Benkelman very fine sandy loam, 0 to 2 percent slopes	Prime farmland if irrigated
1500	Blackwood loam, 0 to 1 percent slopes	Prime farmland if irrigated
2250	Craft very fine sandy loam, 0 to 2 percent slopes, rarely flooded	Prime farmland if irrigated
2630	Duroc loam, 0 to 1 percent slopes	Prime farmland if irrigated
5949	Otero fine sandy loam, 0 to 2 percent slopes	Prime farmland if irrigated
6700	Satanta fine sandy loam, 0 to 2 percent slopes	Prime farmland if irrigated
7090	Sulco fine sandy loam, 3 to 6 percent slopes	Prime farmland if irrigated
7461	Ulysses loam, 1 to 3 percent slopes	Prime farmland if irrigated
7462	Ulysses loam, 3 to 6 percent slopes	Prime farmland if irrigated

The "Soil Rating for Plant Growth, modified 1998" (SRPG) is a relative rating of the capacity of a soil to produce a specific plant under a defined management system. The index is determined from yield data on a few benchmark soils and is used to calculate yields, the net returns from crops, land assessment values, and taxes and to perform risk analysis when land management decisions are made. Specific information on plants and yields can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Map symbol	Soil name	Crop Index
1331	Bankard Sand, 0 To 2 Percent Slopes, Occasionally Flooded-----	18
1465	Benkelman Very Fine Sandy Loam, 0 To 2 Percent Slopes-----	45
1500	Blackwood Loam, 0 To 1 Percent Slopes-----	64
1502	Blackwood Loam, 1 To 3 Percent Slopes-----	63
1524	Blanche Loamy Sand, 0 To 3 Percent Slopes-----	18
1526	Blanche Loamy Sand, 3 To 6 Percent Slopes-----	26
1700	Bolent-Almeria Complex, 0 To 2 Percent Slopes, Channeled, Frequently Flooded-----	18
1940	Calamus Coarse Sand, 0 To 2 Percent Slopes, Rarely Flooded-----	18
2140	Colfer Sand, 0 To 3 Percent Slopes-----	24
2250	Craft Very Fine Sandy Loam, 0 To 2 Percent Slopes, Rarely Flooded-----	37
2254	Craft Very Fine Sandy Loam, 0 To 2 Percent Slopes, Channeled, Frequently Flooded-----	29
2394	Dailey Loamy Sand, 0 To 3 Percent Slopes-----	29
2630	Duroc Loam, 0 To 1 Percent Slopes-----	61
3280	Haigler Very Fine Sandy Loam, 0 To 2 Percent Slopes, Rarely Flooded-----	8
4042	Jayem Loamy Sand, 0 To 3 Percent Slopes-----	50
4140	Kanorado Silty Clay Loam, 6 To 9 Percent Slopes-----	30
4380	Laird Fine Sandy Loam, 0 To 2 Percent Slopes-----	25
4665	Lodgepole Silty Clay Loam, Occasionally Ponded, 0 To 1 Percent Slopes-----	29
4667	Lodgepole Silty Clay Loam, Frequently Ponded, 0 To 1 Percent Slopes-----	7
5949	Otero Fine Sandy Loam, 0 To 2 Percent Slopes-----	37
5975	Overlake Sand, 0 To 3 Percent Slopes-----	32
6091	Pits, Sand And Gravel-----	13
6570	Sanborn Loam, 0 To 2 Percent Slopes, Rarely Flooded-----	19
6632	Sarben Loamy Sand, 0 To 3 Percent Slopes-----	36
6633	Sarben Loamy Sand, 3 To 6 Percent Slopes-----	35
6634	Sarben Loamy Sand, 6 To 9 Percent Slopes-----	34
6635	Sarben Loamy Sand, 9 To 30 Percent Slopes-----	19
6700	Satanta Fine Sandy Loam, 0 To 2 Percent Slopes-----	57
6820	Scoville Loamy Sand, Calcareous, 1 To 3 Percent Slopes-----	27
7090	Sulco Fine Sandy Loam, 3 To 6 Percent Slopes-----	43
7096	Sulco Loam, 3 To 6 Percent Slopes-----	39
7098	Sulco Loam, 6 To 9 Percent Slopes-----	37
7100	Sulco Loam, 9 To 30 Percent Slopes-----	29
7102	Sulco Complex, 9 To 60 Percent Slopes-----	10
7152	Tassel-Ashollow-Rock Outcrop Complex, 9 To 60 Percent Slopes-----	5
7461	Ulysses Loam, 1 To 3 Percent Slopes-----	55
7462	Ulysses Loam, 3 To 6 Percent Slopes-----	56
7602	Valent Loamy Sand, 3 To 9 Percent Slopes-----	22
7610	Valent Sand, 0 To 3 Percent Slopes-----	22
7612	Valent Sand, 3 To 9 Percent Slopes-----	21
7616	Valent Sand, Rolling-----	13
7618	Valent Complex, Rolling And Hilly-----	7
9999a	Water Areas Greater Than 40 Acres-----	0

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(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro- logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
1331:BANKARD----	95	4w-12	6w	Not prime farmland	A	No Site	10	.17	.17	4	2	134
1465:BENKELMAN--	95	2e-6	2c	Prime farmland if irrigated	B	Silty - Veg. Zone 2	2K	.37	.37	5	3	86
1500:BLACKWOOD--	98	1-6	2c	Prime farmland if irrigated	B	Silty - Veg. Zone 2	3	.28	.28	5	5	56
1502:BLACKWOOD--	98	2e-6	2e	Not prime farmland	B	Silty - Veg. Zone 2	3	.28	.28	5	5	56
1524:BLANCHE----	90	4e-11	4e	Not prime farmland	B	Sandy - Veg. Zone 2	6D	.17	.17	3	2	134
1526:BLANCHE----	90	4e-11	6e	Not prime farmland	B	Sandy - Veg. Zone 2	6D	.17	.17	3	2	134
1700:BOLENT-----	65	N/A	6w	Not prime farmland	A	Subirrigated - Veg. Zone 2	2K	.17	.17	3	2	134
1700:ALMERIA----	25	N/A	6w	Not prime farmland	D	Wet Land - Veg. Zone 2	10	.32	.32	5	8	0
1940:CALAMUS----	90	4s-14	6s	Not prime farmland	A	Shallow To Gravel - Veg. Zone 2	10	.10	.10	5	1	160
2140:COLFER-----	90	4e-12	6e	Not prime farmland	A	Sandy - Veg. Zone 2	7	.15	.15	5	1	250
2250:CRAFT-----	95	2e-6	2c	Prime farmland if irrigated	B	Silty Lowland - Veg. Zone 2	8	.37	.37	5	3	86
2254:CRAFT-----	95	N/A	6w	Not prime farmland	B	Silty Overflow - Veg. Zone 2	10	.37	.37	5	3	86
2394:DAILEY-----	85	4e-11	4e	Not prime farmland	A	Sandy - Veg. Zone 2	7	.17	.17	5	2	134
2630:DUROC-----	98	1-6	2c	Prime farmland if irrigated	B	Silty Lowland - Veg. Zone 2	3	.28	.28	5	5	56
3280:HAIGLER----	90	4s-8	4s	Not prime farmland	C	Saline Lowland - Veg. Zone 2	1K	.37	.37	5	3	86
4042:JAYEM-----	90	3e-10	4e	Not prime farmland	B	Sandy - Veg. Zone 2	3	.17	.17	5	2	134
4140:KANORADO---	95	4e-3	4e	Not prime farmland	C	Clayey - Veg. Zone 2	4CK	.37	.37	4	4	86
4380:LAIRD-----	90	4s-8	4s	Not prime farmland	B	Saline Lowland - Veg. Zone 2	8	.20	.20	4	3	86
4665:LODGEPOLE--	95	4w-2	3w	Not prime farmland	D	Clayey Overflow - Veg. Zone 2	10	.37	.37	3	7	38

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(Entries under "Erosion factors--T" apply to the entire profile. Entries under "K", "Kf", "Wind Erodibility Group" and "Wind Erodibility Index" apply only to the surface layer)

Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro- logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
4667:LODGEPOLE--	95	N/A	5w	Not prime farmland	D	No Site	10	.37	.37	3	7	38
5949:OTERO-----	90	2e-8	3e	Prime farmland if irrigated	B	Sandy - Veg. Zone 2	8	.24	.24	5	3	86
5975:OVERLAKE---	90	4e-10	6e	Not prime farmland	A	Sandy - Veg. Zone 2	7	.15	.15	5	1	250
6091:PITS-----	100	N/A	8s	Not prime farmland	A	No Site - Veg. Zone 2	10	.15	.15	2	8	0
6570:SANBORN----	90	N/A	6s	Not prime farmland	C	Saline Subirrigated - Veg. Zone 2	9W	.28	.28	5	4L	86
6632:SARBEN-----	85	3e-10	4e	Not prime farmland	B	Sandy - Veg. Zone 2	3	.17	.17	5	2	134
6633:SARBEN-----	85	4e-10	4e	Not prime farmland	B	Sandy - Veg. Zone 2	3	.17	.17	5	2	134
6634:SARBEN-----	85	4e-10	6e	Not prime farmland	B	Sandy - Veg. Zone 2	3	.17	.17	5	2	134
6635:SARBEN-----	85	N/A	6e	Not prime farmland	B	Sandy - Veg. Zone 2	3	.17	.17	5	2	134
6700:SATANTA----	85	2e-5	2e	Prime farmland if irrigated	B	Silty - Veg. Zone 2	3	.20	.20	5	3	86
6820:SCOVILLE---	90	4e-10	4e	Not prime farmland	A	Sandy - Veg. Zone 2	7	.17	.17	5	2	134
7090:SULCO-----	85	3e-6	4e	Prime farmland if irrigated	B	Limy Upland - Veg. Zone 2	8	.24	.24	5	4L	86
7096:SULCO-----	95	3e-6	4e	Not prime farmland	B	Limy Upland - Veg. Zone 2	8	.37	.37	5	4L	86
7098:SULCO-----	95	4e-6	4e	Not prime farmland	B	Limy Upland - Veg. Zone 2	8	.37	.37	5	4L	86
7100:SULCO-----	85	N/A	6e	Not prime farmland	B	Limy Upland - Veg. Zone 2	8	.37	.37	5	4L	86
7102:SULCO-----	70	N/A	7e	Not prime farmland	B	Limy Upland - Veg. Zone 2	8	.37	.37	5	4L	86
	20	N/A	6e	Not prime farmland	B	Limy Upland - Veg. Zone 2	8	.37	.37	5	4L	86
7152:TASSEL-----	50	N/A	7s	Not prime farmland	D	Shallow Limy - Veg. Zone 2	10	.24	.24	2	3	86
7152:ASHOLLOW---	25	N/A	6e	Not prime farmland	B	Sandy - Veg. Zone 2	10	.24	.24	5	3	86

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Map symbol and soil name	Percent	Irr Cap Class	Nonirr Cap Class	Prime Farmland	Hydro- logic Group	Range site name	Windbreak suitability group	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								K	Kf	T		
7152:ROCK OUTCROP-----	25	N/A	8s	Not prime farmland	D	No Site - Veg. Zone 2	10	---	---	-	8	0
7461:ULYSSES----	95	2e-6	2e	Prime farmland if irrigated	B	Silty - Veg. Zone 2	3	.28	.28	5	5	56
7462:ULYSSES----	90	3e-6	3e	Prime farmland if irrigated	B	Silty - Veg. Zone 2	3	.28	.28	5	5	56
7602:VALENT-----	90	4e-11	6e	Not prime farmland	A	Sandy - Veg. Zone 2	7	.17	.17	5	2	134
7610:VALENT-----	90	4e-12	6e	Not prime farmland	A	Sandy - Veg. Zone 2	7	.15	.15	5	2	250
7612:VALENT-----	95	4e-12	6e	Not prime farmland	A	Sands - Veg. Zone 2	7	.15	.15	5	2	250
7616:VALENT-----	90	N/A	6e	Not prime farmland	A	Sands - Veg. Zone 2	7	.15	.15	5	2	250
7618:VALENT-----	55	N/A	7e	Not prime farmland	A	Sands - Veg. Zone 2	7	.15	.15	5	2	250
	35	N/A	6e	Not prime farmland	A	Choppy-Sands - Veg. Zone 2	7	.15	.15	5	2	250
9999a:WATER-----	100	N/A	N/A	Not prime farmland		Unspecified		---	---	-	---	---

RANGELAND PRODUCTIVITY
Dundy County, Nebraska

Use and Explanation of Rangeland, Grazed Forest Land, Native Pastureland Interpretations

Information in this subsection can be used to plan the use and management of soils for rangeland, grazed forest land, and native pasture. Different kinds of soils vary in their capacity to produce native grasses and other plants suitable for grazing. Information in this subsection provides groupings of similar soils and estimates of potential forage production, which can be used to determine livestock stocking rates.

Rangeland. Range is land on which the native vegetation (climax or natural potential plant community) is predominantly grasses, grasslike plants, forbs, and shrubs suitable for grazing and browsing. Range includes natural grasslands, savannas, many wetlands, some deserts, tundra, and certain shrub and forb communities. Rangeland receives no regular or frequent cultural treatment. The composition and production of the plant community are determined by soil, climate, topography, overstory canopy, and grazing management.

Grazed Forest Land. Includes land on which the understory includes, as an integral part of the forest plant community, plants that can be grazed without significantly impairing other forest values.

Native Pasture. Includes land on which the native vegetation (climax or natural potential plant community) is forest but which is used and managed primarily for production of native plants for forage. Native pasture includes cut-over forest land and forest land cleared and now managed for native or naturalized forage plants.

Rangeland

In areas that have similar climate and topography, differences in the kind and amount of vegetation produced on rangeland are closely related to the kind of soil. Effective management based on the relationship between the soils and vegetation and water.

The Rangeland, Grazed Forest land, Native Pastureland Interpretations shows, for each soil that supports rangeland vegetation, the ecological site and the potential annual production of vegetation in favorable, normal, unfavorable years. An explanation of the column headings in this table follows.

An ecological site is the product of all the environmental factors responsible for its development. It has characteristic soils that have developed over time throughout the soil development process; a characteristic hydrology, particularly infiltration and runoff, that has developed over time; and a characteristic plant community (kind and amount of vegetation). The hydrology of a site is influenced by development of the soil and plant community. The vegetation, soils, and hydrology are all interrelated. Each is influenced by the others and influences the development of the others. The plant community on an ecological site is typified by an association of species that differs from that of other ecological sites in the kind and/or proportion of species or in total production. Descriptions of ecological sites are provided in the Field Office Technical Guide, which is available in local offices of the Natural Resources Conservation Service.

Total dry-weight production is the amount of vegetation that can be expected to grow annually on well managed rangeland that is supporting the potential natural plant community. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year's growth of leaves, twigs, and fruits of woody plants. It does not include the increase in stem diameter of trees and shrubs. It is expressed in pounds per acre of air-dry vegetation for favorable, average, and unfavorable years. In a favorable year, the amount and distribution of precipitation and the temperatures make growing conditions substantially better than average. In a normal year, growing conditions are about average. In an unfavorable year, growing conditions are well below average, generally because of low available soil moisture. Yields are adjusted to a common percent of air-dry moisture content.

Range management requires a knowledge of the kinds of soil and of the potential natural plant community. It also requires an evaluation of the present range similarity index and rangeland trend. Range similarity index is determined by comparing the present plant community with the potential natural plant community on a particular rangeland ecological site. The more closely the existing community resembles the potential community, the higher the range similarity index. Rangeland trend is defined as the direction of change in an existing plant community relative to the potential natural plant community. Further information about the range similarity index and rangeland trend is available in chapter 4 of the National Range and Pasture Handbook, which is available in local offices of the Natural Resources Conservation Service. The objective in range management is to control grazing so that the plants growing on a site are about the same in kind and amount as the potential natural plant community for that site. Such management generally results in the optimum production of vegetation, control of undesirable brush species, conservation of water, and control of erosion. Sometimes, however, an area with a range similarity index somewhat below the potential meets grazing needs, provides wildlife habitat, and protects soil and water resources.

RANGELAND PRODUCTIVITY--Continued
Dundy County, Nebraska

(Only the soils that support rangeland vegetation suitable for grazing are rated.) Refer to range site description to determine the percentage allowable of grasses, forbs, and shrubs for the range ecological site.

Map symbol and soil name	Ecological site	Total dry-weight production		
		Favorable year	Average year	Unfavorable year
		Lb/acre	Lb/acre	Lb/acre
1331: Bankard-----	No Site	---	---	---
1465: Benkelman-----	Silty - Veg. Zone 2	3,300	2,500	1,700
1500: Blackwood-----	Silty - Veg. Zone 2	3,300	2,500	1,700
1502: Blackwood-----	Silty - Veg. Zone 2	3,300	2,500	1,700
1524: Blanche-----	Sandy - Veg. Zone 2	2,600	2,300	1,900
1526: Blanche-----	Sandy - Veg. Zone 2	2,600	2,300	1,900
1700: Bolent-----	Subirrigated - Veg. Zone 2	5,500	5,000	4,200
Almeria-----	Wet Land - Veg. Zone 2	5,500	5,000	4,500
1940: Calamus-----	Shallow To Gravel - Veg. Zone 2	1,300	900	600
2140: Colfer-----	Sandy - Veg. Zone 2	3,000	2,300	1,700
2250: Craft-----	Silty Lowland - Veg. Zone 2	2,800	2,400	2,000
2254: Craft-----	Silty Overflow - Veg. Zone 2	3,000	2,800	2,500
2394: Dailey-----	Sandy - Veg. Zone 2	3,000	2,300	1,700
2630: Duroc-----	Silty Lowland - Veg. Zone 2	3,800	3,000	2,300
3280: Haigler-----	Saline Lowland - Veg. Zone 2	2,500	1,800	1,000
4042: Jayem-----	Sandy - Veg. Zone 2	3,000	2,300	1,600
4140: Kanorado-----	Clayey - Veg. Zone 2	1,700	1,300	1,000
4380: Laird-----	Saline Lowland - Veg. Zone 2	2,500	1,800	1,000
4665: Lodgepole-----	Clayey Overflow - Veg. Zone 2	1,200	1,000	700
4667: Lodgepole-----	No Site	---	---	---
5949: Otero-----	Sandy - Veg. Zone 2	3,000	2,300	1,600
5975: Overlake-----	Sandy - Veg. Zone 2	3,000	2,300	1,700
6091: Pits-----	No Site - Veg. Zone 2	---	---	---
6570: Sanborn-----	Saline Subirrigated - Veg. Zone 2	3,800	3,000	2,200
6632: Sarben-----	Sandy - Veg. Zone 2	3,000	2,600	2,200
6633: Sarben-----	Sandy - Veg. Zone 2	3,000	2,600	2,200
6634: Sarben-----	Sandy - Veg. Zone 2	3,000	2,600	2,200
6635: Sarben-----	Sandy - Veg. Zone 2	3,000	2,600	2,200
6700: Satanta-----	Silty - Veg. Zone 2	3,200	2,500	1,800
6820: Scoville-----	Sandy - Veg. Zone 2	2,300	1,600	1,100
7090: Sulco-----	Limy Upland - Veg. Zone 2	2,800	2,000	1,500
7096: Sulco-----	Limy Upland - Veg. Zone 2	2,800	2,000	1,500
7098: Sulco-----	Limy Upland - Veg. Zone 2	2,800	2,000	1,500
7100: Sulco-----	Limy Upland - Veg. Zone 2	2,800	2,000	1,500
7102: Sulco, eroded-----	Limy Upland - Veg. Zone 2	2,800	2,000	1,500
7152: Sulco-----	Limy Upland - Veg. Zone 2	2,300	2,000	1,000
Tassel-----	Shallow Limy - Veg. Zone 2	1,500	1,100	700
Ashollow-----	Sandy - Veg. Zone 2	2,300	1,600	1,200
Rock Outcrop-----	No Site - Veg. Zone 2	0	0	0
7461: Ulysses-----	Silty - Veg. Zone 2	3,300	2,500	1,700
7462: Ulysses-----	Silty - Veg. Zone 2	3,300	2,500	1,700
7602: Valent-----	Sandy - Veg. Zone 2	3,000	2,600	2,000
7610: Valent-----	Sandy - Veg. Zone 2	3,000	2,600	2,000
7612:				

RANGELAND PRODUCTIVITY--Continued
Dundy County, Nebraska

(Only the soils that support rangeland vegetation suitable for grazing are rated.) Refer to range site description to determine the percentage allowable of grasses, forbs, and shrubs for the range ecological site.

Map symbol and soil name	Ecological site	Total dry-weight production		
		Favorable year	Average year	Unfavorable year
		Lb/acre	Lb/acre	Lb/acre
Valent----- 7616:	Sands - Veg. Zone 2	3,000	2,600	2,000
Valent----- 7618:	Sands - Veg. Zone 2	3,000	2,600	2,000
Valent-----	Sands - Veg. Zone 2	3,000	2,600	2,000
Valent----- 9999a:	Choppy-Sands - Veg. Zone 2	2,800	2,400	1,800
Water-----	---	---	---	---

BUILDING SITE DEVELOPMENT
Dundy County, Nebraska

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. These tables show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

BUILDING SITE DEVELOPMENT--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1331: Bankard-----	95	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
1465: Benkelman-----	95	Not limited		Not limited		Not limited	
1500: Blackwood-----	98	Not limited		Not limited		Not limited	
1502: Blackwood-----	98	Not limited		Not limited		Not limited	
1524: Blanche-----	90	Not limited		Somewhat limited Depth to soft bedrock	0.97	Not limited	
1526: Blanche-----	90	Not limited		Somewhat limited Depth to soft bedrock	0.64	Somewhat limited Slope	0.00
1700: Bolent-----	65	Very limited Flooding Depth to saturated zone	1.00 0.07	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.07
Almeria-----	25	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
1940: Calamus-----	90	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.35	Very limited Flooding	1.00
2140: Colfer-----	90	Not limited		Not limited		Not limited	
2250: Craft-----	95	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
2254: Craft-----	95	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
2394: Dailey-----	85	Not limited		Not limited		Not limited	
2630: Duroc-----	98	Not limited		Not limited		Not limited	
3280: Haigler-----	90	Very limited Flooding	1.00	Very limited Flooding Depth to saturated zone	1.00 0.35	Very limited Flooding	1.00
4042: Jayem-----	90	Not limited		Not limited		Not limited	
4140: Kanorado-----	95	Very limited Shrink-swell Slope	1.00 0.00	Very limited Shrink-swell Slope	1.00 0.00	Very limited Shrink-swell Slope	1.00 1.00
4380: Laird-----	90	Not limited		Not limited		Not limited	
4665: Lodgepole-----	95	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00
4667: Lodgepole-----	95	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Shrink-swell	1.00 1.00 1.00
5949: Otero-----	90	Not limited		Not limited		Not limited	
5975: Overlake-----	90	Not limited		Not limited		Not limited	
6091: Pits-----	100	Not rated		Not rated		Not rated	

BUILDING SITE DEVELOPMENT--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Dwellings without basements		Dwellings with basements		Small commercial buildings	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
6570: Sanborn-----	90	Very limited Flooding Depth to saturated zone	1.00 0.07	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 0.07
6632: Sarben-----	85	Not limited		Not limited		Not limited	
6633: Sarben-----	85	Not limited		Not limited		Somewhat limited Slope	0.00
6634: Sarben-----	85	Somewhat limited Slope	0.00	Somewhat limited Slope	0.00	Very limited Slope	1.00
6635: Sarben-----	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
6700: Satanta-----	85	Not limited		Not limited		Not limited	
6820: Scoville-----	90	Not limited		Not limited		Not limited	
7090: Sulco-----	85	Not limited		Not limited		Somewhat limited Slope	0.03
7096: Sulco-----	95	Not limited		Not limited		Somewhat limited Slope	0.03
7098: Sulco-----	95	Not limited		Not limited		Somewhat limited Slope	0.96
7100: Sulco-----	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
7102: Sulco, eroded-----	70	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Sulco-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
7152: Tassel-----	50	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Slope Depth to soft bedrock	1.00 1.00	Very limited Slope Depth to soft bedrock	1.00 1.00
Ashollow-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Rock Outcrop-----	25	Not rated		Not rated		Not rated	
7461: Ulysses-----	95	Not limited		Not limited		Not limited	
7462: Ulysses-----	90	Not limited		Not limited		Somewhat limited Slope	0.03
7602: Valent-----	90	Not limited		Not limited		Somewhat limited Slope	0.48
7610: Valent-----	90	Not limited		Not limited		Not limited	
7612: Valent-----	95	Not limited		Not limited		Somewhat limited Slope	0.48
7616: Valent-----	90	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
7618: Valent-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Valent-----	35	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
9999a: Water-----	100	Not rated		Not rated		Not rated	

BUILDING SITE DEVELOPMENT--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1331: Bankard-----	95	Very limited Flooding	1.00	Very limited Cutbanks cave Flooding	1.00 0.60	Somewhat limited Droughty Flooding	0.79 0.60
1465: Benkelman-----	95	Somewhat limited Frost action	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
1500: Blackwood-----	98	Somewhat limited Frost action	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
1502: Blackwood-----	98	Somewhat limited Frost action	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
1524: Blanche-----	90	Not limited		Somewhat limited Depth to soft bedrock Cutbanks cave	0.97 0.10	Somewhat limited Depth to bedrock Droughty	0.97 0.32
1526: Blanche-----	90	Not limited		Somewhat limited Depth to soft bedrock Cutbanks cave	0.64 0.10	Somewhat limited Depth to bedrock	0.65
1700: Bolent-----	65	Very limited Flooding Frost action	1.00 0.50	Very limited Cutbanks cave Depth to saturated zone Flooding	1.00 1.00 0.60	Somewhat limited Droughty Flooding Depth to saturated zone	0.76 0.60 0.03
Almeria-----	25	Very limited Flooding Depth to saturated zone Frost action	1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave Flooding	1.00 1.00 0.80	Very limited Flooding Depth to saturated zone	1.00 1.00
1940: Calamus-----	90	Somewhat limited Flooding	0.40	Very limited Cutbanks cave Depth to saturated zone	1.00 0.35	Very limited Too sandy Droughty Gravel content	1.00 0.89 0.02
2140: Colfer-----	90	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Too sandy Droughty	0.50 0.22
2250: Craft-----	95	Somewhat limited Flooding	0.40	Somewhat limited Cutbanks cave	0.10	Not limited	
2254: Craft-----	95	Very limited Flooding	1.00	Somewhat limited Flooding Cutbanks cave	0.80 0.10	Very limited Flooding	1.00
2394: Dailey-----	85	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.44
2630: Duroc-----	98	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
3280: Haigler-----	90	Somewhat limited Frost action Flooding	0.50 0.40	Very limited Cutbanks cave Depth to saturated zone	1.00 0.35	Very limited Sodium content	1.00
4042: Jayem-----	90	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
4140: Kanorado-----	95	Very limited Low strength Shrink-swell Slope	1.00 1.00 0.00	Somewhat limited Cutbanks cave Slope	0.10 0.00	Somewhat limited Slope	0.00
4380: Laird-----	90	Somewhat limited Frost action	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	

BUILDING SITE DEVELOPMENT--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
4665: Lodgepole-----	95	Very limited Ponding Depth to saturated zone Frost action Low strength Shrink-swell	1.00 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Cutbanks cave	1.00 1.00 0.12 0.10	Very limited Ponding Depth to saturated zone	1.00 1.00
4667: Lodgepole-----	95	Very limited Ponding Depth to saturated zone Frost action Low strength Shrink-swell	1.00 1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey Cutbanks cave	1.00 1.00 0.12 0.10	Very limited Ponding Depth to saturated zone	1.00 1.00
5949: Otero-----	90	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
5975: Overlake-----	90	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Too sandy Droughty	0.50 0.06
6091: Pits-----	100	Not rated		Not rated		Not rated	
6570: Sanborn-----	90	Somewhat limited Frost action Flooding Depth to saturated zone	0.50 0.40 0.03	Very limited Cutbanks cave Depth to saturated zone	1.00 1.00	Very limited Sodium content Depth to saturated zone Salinity	1.00 0.03 0.00
6632: Sarben-----	85	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
6633: Sarben-----	85	Not limited		Very limited Cutbanks cave	1.00	Not limited	
6634: Sarben-----	85	Somewhat limited Slope	0.00	Somewhat limited Cutbanks cave Slope	0.10 0.00	Somewhat limited Slope	0.00
6635: Sarben-----	85	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope	1.00
6700: Satanta-----	85	Somewhat limited Frost action	0.50	Somewhat limited Cutbanks cave	0.10	Not limited	
6820: Scoville-----	90	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.71
7090: Sulco-----	85	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
7096: Sulco-----	95	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
7098: Sulco-----	95	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
7100: Sulco-----	85	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
7102: Sulco, eroded-----	70	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00
Sulco-----	20	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 0.10	Very limited Slope	1.00

BUILDING SITE DEVELOPMENT--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7152: Tassel-----	50	Very limited Slope	1.00	Very limited Depth to soft bedrock	1.00	Very limited Depth to bedrock	1.00
		Depth to soft bedrock	1.00	Slope	1.00	Slope	1.00
Ashollow-----	25	Very limited Slope	1.00	Cutbanks cave	0.10	Droughty	1.00
				Very limited Slope	1.00	Very limited Slope	1.00
Rock Outcrop-----	25	Not rated		Cutbanks cave	0.10		
				Not rated		Not rated	
7461: Ulysses-----	95	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
7462: Ulysses-----	90	Not limited		Somewhat limited Cutbanks cave	0.10	Not limited	
7602: Valent-----	90	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.74
7610: Valent-----	90	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty Too sandy	0.83 0.50
7612: Valent-----	95	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty Too sandy	0.83 0.50
7616: Valent-----	90	Very limited Slope	1.00	Very limited Cutbanks cave	1.00	Very limited Slope	1.00
				Slope	1.00	Droughty	0.83
						Too sandy	0.50
7618: Valent-----	55	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
				Cutbanks cave	1.00	Droughty	0.90
						Too sandy	0.50
Valent-----	35	Very limited Slope	1.00	Very limited Cutbanks cave	1.00	Very limited Slope	1.00
				Slope	1.00	Droughty	0.90
						Too sandy	0.50
9999a: Water-----	100	Not rated		Not rated		Not rated	

CONSTRUCTION MATERIALS
Dundy County, Nebraska

Construction Materials

These tables give information about the soils as potential sources of gravel, sand, topsoil, reclamation material, and roadfill. Normal compaction, minor processing, and other standard construction practices are assumed.

The soils are rated good, fair, or poor as potential sources of topsoil, reclamation material, and roadfill. The features that limit the soils as sources of these materials are specified in the tables. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of topsoil, reclamation material, or roadfill. The lower the number, the greater the limitation.

The soils are rated as a probable or improbable source of sand and gravel. A rating of probable means that the source material is likely to be in or below the soil. The numerical ratings in these columns indicate the degree of probability. The number 0.00 indicates that the soil is an improbable source. A number between 0.00 and 1.00 indicates the degree to which the soil is a probable source of sand or gravel.

Sand and gravel are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In the first table, only the probability of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the lowest layer of the soil contains sand or gravel, the soil is rated as a probable source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

CONSTRUCTION MATERIALS--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
1331: Bankard-----	95	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer Bottom layer	0.32 0.99
1465: Benkelman-----	95	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.06 0.06
1500: Blackwood-----	98	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1502: Blackwood-----	98	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1524: Blanche-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
1526: Blanche-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.01
1700: Bolent-----	65	Poor Bottom layer Thickest layer	0.00 0.00	Good Bottom layer Thickest layer	0.99 0.99
Almeria-----	25	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer Bottom layer	0.46 0.99
1940: Calamus-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.59 0.93
2140: Colfer-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.32 0.32
2250: Craft-----	95	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.06 0.06
2254: Craft-----	95	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.06 0.06
2394: Dailey-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer Bottom layer	0.32 0.99
2630: Duroc-----	98	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
3280: Haigler-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.19
4042: Jayem-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.07 0.07

CONSTRUCTION MATERIALS--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
4140: Kanorado-----	95	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
4380: Laird-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.00 0.07
4665: Lodgepole-----	95	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
4667: Lodgepole-----	95	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
5949: Otero-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.07 0.08
5975: Overlake-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.09 0.84
6091: Pits-----	100	Not rated		Not rated	
6570: Sanborn-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.00
6632: Sarben-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.07 0.07
6633: Sarben-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.07 0.32
6634: Sarben-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.07 0.07
6635: Sarben-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.07
6700: Satanta-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.07
6820: Scoville-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.07 0.73
7090: Sulco-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.06
7096: Sulco-----	95	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00

CONSTRUCTION MATERIALS--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
7098: Sulco-----	95	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
7100: Sulco-----	85	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
7102: Sulco, eroded-----	70	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Sulco-----	20	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
7152: Tassel-----	50	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
Ashollow-----	25	Poor Bottom layer Thickest layer	0.00 0.00	Fair Bottom layer Thickest layer	0.07 0.07
Rock Outcrop-----	25	Not rated		Not rated	
7461: Ulysses-----	95	Poor Bottom layer Thickest layer	0.00 0.00	Fair Thickest layer Bottom layer	0.00 0.05
7462: Ulysses-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Poor Bottom layer Thickest layer	0.00 0.00
7602: Valent-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Good Thickest layer	0.32
7610: Valent-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Good	
7612: Valent-----	95	Poor Bottom layer Thickest layer	0.00 0.00	Good	
7616: Valent-----	90	Poor Bottom layer Thickest layer	0.00 0.00	Good	
7618: Valent-----	55	Poor Bottom layer Thickest layer	0.00 0.00	Good	
Valent-----	35	Poor Bottom layer Thickest layer	0.00 0.00	Good	
9999a: Water-----	100	Not rated		Not rated	

CONSTRUCTION MATERIALS--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1331: Bankard-----	95	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.12 0.18	Good		Poor Too sandy	0.00
1465: Benkelman-----	95	Poor Too alkaline Low content of organic matter Water erosion	0.00 0.12 0.90	Good		Good	
1500: Blackwood-----	98	Fair Low content of organic matter	0.12	Good		Good	
1502: Blackwood-----	98	Fair Low content of organic matter	0.50	Good		Good	
1524: Blanche-----	90	Poor Wind erosion Droughty Depth to bedrock Low content of organic matter	0.00 0.01 0.03 0.50	Poor Depth to bedrock	0.00	Fair Depth to bedrock	0.03
1526: Blanche-----	90	Poor Wind erosion Droughty Depth to bedrock Low content of organic matter	0.00 0.24 0.35 0.50	Poor Depth to bedrock	0.00	Fair Depth to bedrock	0.35
1700: Bolent-----	65	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.12 0.85	Fair Depth to saturated zone	0.76	Poor Too sandy Depth to saturated zone	0.00 0.76
Almeria-----	25	Poor Too sandy Low content of organic matter	0.00 0.12	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Too sandy	0.00 0.00
1940: Calamus-----	90	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.12 0.26	Good		Poor Too sandy Hard to reclaim	0.00 0.98
2140: Colfer-----	90	Poor Too sandy Wind erosion Low content of organic matter Carbonate content	0.00 0.00 0.12 0.92	Good		Poor Too sandy	0.00
2250: Craft-----	95	Fair Low content of organic matter Water erosion	0.12 0.90	Good		Good	

CONSTRUCTION MATERIALS--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2254: Craft-----	95	Fair Low content of organic matter Water erosion	0.12 0.90	Good		Good	
2394: Dailey-----	85	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.12 0.96	Good		Poor Too sandy	0.00
2630: Duroc-----	98	Fair Low content of organic matter	0.12	Good		Good	
3280: Haigler-----	90	Poor Too alkaline Sodium content Low content of organic matter Too sandy Water erosion	0.00 0.00 0.12 0.31 0.90	Good		Poor Sodium content Too sandy Salinity	0.00 0.31 0.50
4042: Jayem-----	90	Poor Wind erosion Low content of organic matter	0.00 0.12	Good		Good	
4140: Kanorado-----	95	Poor Too clayey Low content of organic matter Carbonate content Water erosion	0.00 0.12 0.46 0.90	Poor Low strength Depth to bedrock Shrink-swell	0.00 0.12 0.12	Poor Too Clayey Carbonate content	0.00 0.46
4380: Laird-----	90	Fair Low content of organic matter Sodium content Carbonate content Water erosion	0.12 0.15 0.46 0.99	Good		Fair Sodium content Carbonate content	0.15 0.46
4665: Lodgepole-----	95	Poor Too clayey Low content of organic matter Too acid Water erosion	0.00 0.12 0.99 0.99	Poor Depth to saturated zone Shrink-swell Low strength	0.00 0.25 0.78	Poor Too Clayey Depth to saturated zone	0.00 0.00
4667: Lodgepole-----	95	Poor Too clayey Too acid Water erosion	0.00 0.99 0.99	Poor Depth to saturated zone Shrink-swell Low strength	0.00 0.38 0.78	Poor Too Clayey Depth to saturated zone	0.00 0.00
5949: Otero-----	90	Fair Low content of organic matter	0.12	Good		Good	
5975: Overlake-----	90	Poor Too sandy Wind erosion Too alkaline Low content of organic matter Water erosion	0.00 0.00 0.00 0.12 0.90	Good		Poor Too sandy	0.00

CONSTRUCTION MATERIALS--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
6091: Pits-----	100	Not rated		Not rated		Not rated	
6570: Sanborn-----	90	Poor Too alkaline Sodium content Low content of organic matter Water erosion	0.00 0.00 0.12 0.90	Fair Depth to saturated zone	0.76	Poor Sodium content Depth to saturated zone	0.00 0.76
6632: Sarben-----	85	Poor Wind erosion Low content of organic matter	0.00 0.12	Good		Good	
6633: Sarben-----	85	Poor Wind erosion Low content of organic matter	0.00 0.12	Good		Good	
6634: Sarben-----	85	Poor Wind erosion Low content of organic matter	0.00 0.12	Good		Good	
6635: Sarben-----	85	Poor Wind erosion Low content of organic matter	0.00 0.12	Fair Slope	0.50	Poor Slope	0.00
6700: Satanta-----	85	Fair Low content of organic matter Water erosion	0.12 0.99	Good		Good	
6820: Scoville-----	90	Poor Too sandy Wind erosion Low content of organic matter	0.00 0.00 0.12	Good		Poor Too sandy	0.00
7090: Sulco-----	85	Poor Too alkaline Low content of organic matter Water erosion	0.00 0.12 0.99	Good		Good	
7096: Sulco-----	95	Poor Too alkaline Low content of organic matter Water erosion	0.00 0.12 0.99	Good		Good	
7098: Sulco-----	95	Poor Too alkaline Low content of organic matter Water erosion	0.00 0.12 0.99	Good		Good	
7100: Sulco-----	85	Poor Too alkaline Low content of organic matter Water erosion	0.00 0.12 0.99	Fair Slope	0.50	Poor Slope	0.00

CONSTRUCTION MATERIALS--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7102: Sulco, eroded-----	70	Poor Too alkaline Low content of organic matter Water erosion	0.00 0.12 0.99	Poor Slope	0.00	Poor Slope	0.00
Sulco-----	20	Poor Too alkaline Low content of organic matter Water erosion	0.00 0.12 0.99	Fair Slope	0.50	Poor Slope	0.00
7152: Tassel-----	50	Poor Droughty Depth to bedrock Low content of organic matter	0.00 0.00 0.12	Poor Depth to bedrock Slope	0.00 0.00	Poor Slope Depth to bedrock	0.00 0.00
Ashollow-----	25	Fair Low content of organic matter	0.12	Fair Slope	0.50	Poor Slope	0.00
Rock Outcrop-----	25	Not rated		Not rated		Not rated	
7461: Ulysses-----	95	Fair Low content of organic matter Water erosion	0.12 0.99	Good		Good	
7462: Ulysses-----	90	Fair Low content of organic matter Water erosion	0.50 0.99	Good		Good	
7602: Valent-----	90	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.12 0.86	Good		Poor Too sandy	0.00
7610: Valent-----	90	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.12 0.16	Good		Poor Too sandy	0.00
7612: Valent-----	95	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.12 0.80	Good		Poor Too sandy	0.00
7616: Valent-----	90	Poor Too sandy Wind erosion Low content of organic matter Droughty	0.00 0.00 0.12 0.80	Fair Slope	0.50	Poor Too sandy Slope	0.00 0.00
7618: Valent-----	55	Poor Too sandy Wind erosion Droughty Low content of organic matter	0.00 0.00 0.11 0.12	Poor Slope	0.00	Poor Slope Too sandy	0.00 0.00

CONSTRUCTION MATERIALS--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Valent-----	35	Poor Too sandy Wind erosion Droughty Low content of organic matter	0.00 0.00 0.11 0.12	Fair Slope	0.50	Poor Too sandy Slope	0.00 0.00
9999a: Water-----	100	Not rated		Not rated		Not rated	

RECREATIONAL INTERPRETATIONS
Dundy County, Nebraska

Recreation

The soils of the survey area are rated in the following tables according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in this table can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas.

The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

RECREATIONAL INTERPRETATIONS--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1331: Bankard-----	95	Very limited Flooding Too sandy	1.00 0.70	Somewhat limited Too sandy	0.70	Somewhat limited Too sandy Flooding	0.70 0.60
1465: Benkelman-----	95	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50
1500: Blackwood-----	98	Not limited		Not limited		Not limited	
1502: Blackwood-----	98	Not limited		Not limited		Somewhat limited Slope	0.00
1524: Blanche-----	90	Somewhat limited Too sandy	0.70	Somewhat limited Too sandy	0.70	Somewhat limited Too sandy Slope	0.70 0.00
1526: Blanche-----	90	Somewhat limited Too sandy	0.70	Somewhat limited Too sandy	0.70	Somewhat limited Too sandy Depth to bedrock Slope	0.70 0.65 0.50
1700: Bolent-----	65	Very limited Flooding Too sandy	1.00 0.70	Somewhat limited Too sandy Depth to saturated zone	0.70 0.03	Somewhat limited Too sandy Flooding	0.70 0.60
		Depth to saturated zone	0.07			Depth to saturated zone	0.07
Almeria-----	25	Very limited Flooding	1.00	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Flooding	1.00
		Depth to saturated zone	1.00			Depth to saturated zone	1.00
1940: Calamus-----	90	Very limited Flooding Too sandy Gravel content	1.00 1.00 0.02	Very limited Too sandy Gravel content	1.00 0.02	Very limited Too sandy Gravel content	1.00 1.00
2140: Colfer-----	90	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy	1.00
2250: Craft-----	95	Very limited Flooding Dusty	1.00 0.50	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50
2254: Craft-----	95	Very limited Flooding Dusty	1.00 0.50	Somewhat limited Dusty Flooding	0.50 0.40	Very limited Flooding Dusty	1.00 0.50
2394: Dailey-----	85	Somewhat limited Too sandy	0.70	Somewhat limited Too sandy	0.70	Somewhat limited Too sandy Slope	0.70 0.00
2630: Duroc-----	98	Not limited		Not limited		Not limited	
3280: Haigler-----	90	Very limited Sodium content Flooding	1.00 1.00	Very limited Sodium content	1.00	Very limited Sodium content	1.00
4042: Jayem-----	90	Somewhat limited Too sandy	0.70	Somewhat limited Too sandy	0.70	Somewhat limited Too sandy	0.70
4140: Kanorado-----	95	Somewhat limited Restricted permeability Slope	0.45 0.00	Somewhat limited Restricted permeability Slope	0.45 0.00	Very limited Slope Restricted permeability	1.00 0.45
4380: Laird-----	90	Not limited		Not limited		Not limited	
4665: Lodgepole-----	95	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
4667: Lodgepole-----	95	Very limited Depth to saturated zone	1.00	Very limited Ponding	1.00	Very limited Depth to saturated zone	1.00

RECREATIONAL INTERPRETATIONS--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Ponding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
5949: Otero-----	90	Not limited		Not limited		Not limited	
5975: Overlake-----	90	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy	1.00
6091: Pits-----	100	Not rated		Not rated		Not rated	
6570: Sanborn-----	90	Very limited Sodium content	1.00	Very limited Sodium content	1.00	Very limited Sodium content	1.00
		Flooding	1.00	Depth to saturated zone	0.03	Depth to saturated zone	0.07
		Depth to saturated zone	0.07	Salinity	0.00	Salinity	0.00
		Salinity	0.00				
6632: Sarben-----	85	Somewhat limited Too sandy	0.70	Somewhat limited Too sandy	0.70	Somewhat limited Too sandy	0.70
						Slope	0.00
6633: Sarben-----	85	Somewhat limited Too sandy	0.70	Somewhat limited Too sandy	0.70	Somewhat limited Too sandy	0.70
						Slope	0.50
6634: Sarben-----	85	Somewhat limited Too sandy	0.70	Somewhat limited Too sandy	0.70	Very limited Slope	1.00
		Slope	0.00	Slope	0.00	Too sandy	0.70
6635: Sarben-----	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Too sandy	0.70	Too sandy	0.70	Too sandy	0.70
6700: Satanta-----	85	Not limited		Not limited		Not limited	
6820: Scoville-----	90	Somewhat limited Too sandy	0.70	Somewhat limited Too sandy	0.70	Somewhat limited Too sandy	0.70
						Slope	0.00
7090: Sulco-----	85	Not limited		Not limited		Somewhat limited Slope	0.72
7096: Sulco-----	95	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Somewhat limited Slope	0.72
						Dusty	0.50
7098: Sulco-----	95	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Very limited Slope	1.00
						Dusty	0.50
7100: Sulco-----	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
7102: Sulco, eroded-----	70	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
Sulco-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Dusty	0.50	Dusty	0.50	Dusty	0.50
7152: Tassel-----	50	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
Ashollow-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Rock Outcrop-----	25	Not rated		Not rated		Not rated	
7461: Ulysses-----	95	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50	Somewhat limited Dusty	0.50
						Slope	0.00
7462: Ulysses-----	90	Somewhat limited		Somewhat limited		Somewhat limited	

RECREATIONAL INTERPRETATIONS--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7602: Valent-----	90	Dusty	0.50	Dusty	0.50	Slope Dusty	0.72 0.50
		Somewhat limited Too sandy	0.70	Somewhat limited Too sandy	0.70	Very limited Slope Too sandy	1.00 0.70
7610: Valent-----	90	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy	1.00
7612: Valent-----	95	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 1.00
7616: Valent-----	90	Very limited Too sandy Slope	1.00 1.00	Very limited Too sandy Slope	1.00 1.00	Very limited Slope Too sandy	1.00 1.00
7618: Valent-----	55	Very limited Slope Too sandy	1.00 1.00	Very limited Too sandy Slope	1.00 1.00	Very limited Slope Too sandy	1.00 1.00
Valent-----	35	Very limited Too sandy Slope	1.00 1.00	Very limited Too sandy Slope	1.00 1.00	Very limited Slope Too sandy	1.00 1.00
9999a: Water-----	100	Not rated		Not rated		Not rated	

RECREATIONAL INTERPRETATIONS--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1331: Bankard-----	95	Somewhat limited Too sandy	0.70	Somewhat limited Droughty Flooding	0.79 0.60
1465: Benkelman-----	95	Somewhat limited Dusty	0.50	Not limited	
1500: Blackwood-----	98	Not limited		Not limited	
1502: Blackwood-----	98	Not limited		Not limited	
1524: Blanche-----	90	Somewhat limited Too sandy	0.70	Somewhat limited Depth to bedrock Droughty	0.97 0.32
1526: Blanche-----	90	Somewhat limited Too sandy	0.70	Somewhat limited Depth to bedrock	0.65
1700: Bolent-----	65	Somewhat limited Too sandy	0.70	Somewhat limited Droughty Flooding Depth to saturated zone	0.76 0.60 0.03
Almeria-----	25	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Flooding Depth to saturated zone	1.00 1.00
1940: Calamus-----	90	Very limited Too sandy	1.00	Very limited Too sandy Droughty Gravel content	1.00 0.89 0.02
2140: Colfer-----	90	Very limited Too sandy	1.00	Somewhat limited Too sandy Droughty	0.50 0.22
2250: Craft-----	95	Somewhat limited Dusty	0.50	Not limited	
2254: Craft-----	95	Somewhat limited Dusty Flooding	0.50 0.40	Very limited Flooding	1.00
2394: Dailey-----	85	Somewhat limited Too sandy	0.70	Somewhat limited Droughty	0.44
2630: Duroc-----	98	Not limited		Not limited	
3280: Haigler-----	90	Not limited		Very limited Sodium content	1.00
4042: Jayem-----	90	Somewhat limited Too sandy	0.70	Not limited	
4140: Kanorado-----	95	Not limited		Somewhat limited Slope	0.00
4380: Laird-----	90	Not limited		Not limited	
4665: Lodgepole-----	95	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
4667: Lodgepole-----	95	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00
5949: Otero-----	90	Not limited		Not limited	
5975: Overlake-----	90	Very limited Too sandy	1.00	Somewhat limited Too sandy Droughty	0.50 0.06
6091: Pits-----	100	Not rated		Not rated	

RECREATIONAL INTERPRETATIONS--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
6570: Sanborn-----	90	Not limited		Very limited Sodium content Depth to saturated zone Salinity	1.00 0.03 0.00
6632: Sarben-----	85	Somewhat limited Too sandy	0.70	Not limited	
6633: Sarben-----	85	Somewhat limited Too sandy	0.70	Not limited	
6634: Sarben-----	85	Somewhat limited Too sandy	0.70	Somewhat limited Slope	0.00
6635: Sarben-----	85	Somewhat limited Too sandy Slope	0.70 0.50	Very limited Slope	1.00
6700: Satanta-----	85	Not limited		Not limited	
6820: Scoville-----	90	Somewhat limited Too sandy	0.70	Somewhat limited Droughty	0.71
7090: Sulco-----	85	Not limited		Not limited	
7096: Sulco-----	95	Somewhat limited Dusty	0.50	Not limited	
7098: Sulco-----	95	Somewhat limited Dusty	0.50	Not limited	
7100: Sulco-----	85	Somewhat limited Dusty Slope	0.50 0.50	Very limited Slope	1.00
7102: Sulco, eroded-----	70	Very limited Slope Dusty	1.00 0.50	Very limited Slope	1.00
Sulco-----	20	Somewhat limited Dusty Slope	0.50 0.50	Very limited Slope	1.00
7152: Tassel-----	50	Very limited Slope	1.00	Very limited Depth to bedrock Slope Droughty	1.00 1.00 1.00
Ashollow-----	25	Somewhat limited Slope	0.50	Very limited Slope	1.00
Rock Outcrop-----	25	Not rated		Not rated	
7461: Ulysses-----	95	Somewhat limited Dusty	0.50	Not limited	
7462: Ulysses-----	90	Somewhat limited Dusty	0.50	Not limited	
7602: Valent-----	90	Somewhat limited Too sandy	0.70	Somewhat limited Droughty	0.74
7610: Valent-----	90	Very limited Too sandy	1.00	Somewhat limited Droughty Too sandy	0.83 0.50
7612: Valent-----	95	Very limited Too sandy	1.00	Somewhat limited Droughty Too sandy	0.83 0.50
7616: Valent-----	90	Very limited Too sandy Slope	1.00 0.50	Very limited Slope Droughty Too sandy	1.00 0.83 0.50

RECREATIONAL INTERPRETATIONS--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value
7618: Valent-----	55	Very limited Too sandy Slope	1.00 1.00	Very limited Slope Droughty Too sandy	1.00 0.90 0.50
Valent-----	35	Very limited Too sandy Slope	1.00 0.50	Very limited Slope Droughty Too sandy	1.00 0.90 0.50
9999a: Water-----	100	Not rated		Not rated	

WILDLIFE INTERPRETATIONS
Dundy County, Nebraska

Use and Explanation of Wildlife Interpretations

Soils directly affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the development of water impoundments. The kind and abundance of wildlife that populate an area depend largely on the amount and distribution of food, cover, water, and living space. If any one of these elements is missing, inadequate, or inaccessible, wildlife will be scarce or will not inhabit the area. If the soils have the potential, wildlife habitat can be created or improved by planting appropriate vegetation, properly managing the existing plant cover, and fostering the natural establishment of desirable plants.

In the Wildlife Interpretations table, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

Suitability Ratings

The potential of the soil is rated good, fair, poor, or very poor.

Good - means that the element of wildlife habitat or the kind of habitat is easily created, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected if the soil is used for the designated purpose.

Fair - means that the element of wildlife habitat or kind of habitat can be created, improved, or maintained in most places. Moderately intensive management is required for satisfactory results.

Poor - means that limitations are severe for the designated element or kind of wildlife habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and requires intensive effort.

Very Poor - means that limitations are very severe for the designated element or kind of wildlife habitat. Habitat is difficult to create, improve, or maintain in most places, and management is difficult and requires intensive effort.

Description of Wildlife Habitat Elements

Openland habitat consists of croplands, pastures, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. The kind of wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, killdeer, cottontail rabbit, red fox, and coyote.

Woodland habitat consists of hardwood or conifers, or a mixture of these and associated grasses, legumes and wild herbaceous plants. Examples of wildlife attracted to this habitat are wild turkey, thrushes, woodpeckers, owl, tree squirrels, raccoon, and deer.

Wetland habitat consists of water-tolerant plants in open, marshy or swampy, shallow water areas. Examples of wildlife attracted to this habitat are ducks, geese, herons, bitterns, rails, kingfishers, shorebirds, muskrat, mink, and beaver.

The elements of wildlife habitat are described in the following paragraphs.

Grain and seed crops are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of grain and seed crops are corn, wheat, oats, and barley.

Grasses and legumes are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Examples of grasses and legumes are fescue, lovegrass, bromegrass, clover, and alfalfa.

Wild herbaceous plants are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of wild herbaceous plants are bluestem, goldenrod, beggarweed, wheatgrass, and grama.

Hardwood trees and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, poplar, cherry, sweetgum, apple, hawthorn, dogwood, hickory, blackberry, and blueberry. Examples of fruit-producing shrubs that are suitable for planting on soils rated good are Russian-olive, autumn-olive, and crabapple.

Coniferous plants furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, spruce, fir, cedar, and juniper.

Shrubs are bushy woody plants that produce fruit, buds, twigs, bark, and foliage. Soil properties and features that affect the growth of shrubs are depth of the root zone, available water capacity, salinity, and soil moisture. Examples of shrubs are fragrant sumac, chokecherry, American plum, sand plum, and gorden currant.

Wetland plants are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are smartweed, wild millet, saltgrass, cordgrass, rushes, sedges, and cattails.

Shallow water areas have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are marshes, waterfowl feeding areas, and ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

Habitat for openland wildlife consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include bobwhite quail, pheasant, meadowlark, field sparrow, cottontail, red fox and coyote.

Habitat for woodland wildlife consists of areas of deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, thrushes, woodpeckers, squirrels, gray fox, raccoon, and deer.

Habitat for wetland wildlife consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, shore birds, muskrat, mink, and beaver.

Habitat for rangeland wildlife consists of areas of shrubs and wild herbaceous plants. Wildlife attracted to rangeland include antelope, deer, cottontail rabbit, prairie chicken, meadowlark, quail, and pheasant.

WILDLIFE INTERPRETATIONS
Dundy County, Nebraska

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Shrubs	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life	Range- land wild- life
1331: BANKARD-----	Poor	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor	Fair
1465: BENKELMAN-----	Good	Good	Fair	Good	Poor	Poor	Very poor	Very poor	Good	Very poor	Very poor	Fair
1500: BLACKWOOD-----	Good	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor	Good
1502: BLACKWOOD-----	Good	Good	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor	Good
1524: BLANCHE-----	Fair	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Good	Very poor	Fair
1526: BLANCHE-----	Fair	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Good	Very poor	Fair
1700: BOLENT-----	Poor	Fair	Good	Good	Good	Good	Fair	Very poor	Fair	Good	Poor	Good
ALMERIA-----	Poor	Fair	Fair	Poor	Poor	Fair	Good	Good	Poor	Poor	Good	Fair
1940: CALAMUS-----	Poor	Good	Fair	Fair	Fair	Fair	Poor	Poor	Fair	Fair	Poor	Fair
2140: COLFER-----	Poor	Fair	Fair	Poor	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor	Fair
2250: CRAFT-----	Good	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Good	Very poor	Fair
2254: CRAFT-----	Good	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Good	Very poor	Fair
2394: DAILEY-----	Poor	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor	Fair
2630: DUROC-----	Good	Good	Fair	Good	Good	Fair	Poor	Very poor	Good	Good	Very poor	Fair
3280: HAIGLER-----	Poor	Poor	Good	Good	Good	Good	Poor	Fair	Fair	Good	Poor	Fair
4042: JAYEM-----	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
4140: KANORADO-----	Fair	Good	Fair	---	---	Fair	Very poor	Very poor	Fair	---	Very poor	Fair
4380: LAIRD-----	Poor	Poor	Poor	Very poor	Very poor	Poor	Poor	Poor	Poor	Very poor	Poor	Poor
4665: LODGEPOLE-----	Poor	Fair	Fair	Poor	Poor	Poor	Good	Good	Fair	Poor	Good	Poor
4667: LODGEPOLE-----	Poor	Fair	Fair	Poor	Poor	Poor	Good	Good	Fair	Poor	Good	Poor
5949: OTERO-----	Fair	Good	Good	Good	Good	Fair	Poor	Very poor	Good	Good	Very poor	Fair
5975: OVERLAKE-----	---	---	---	---	---	---	---	---	---	---	---	---
6091: PITS-----	Very poor	Very poor	Poor	Poor	Poor	Poor	Very poor	Fair	Very poor	Very poor	Poor	Poor

WILDLIFE INTERPRETATIONS--Continued
Dundy County, Nebraska

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Shrubs	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life	Range- land wild- life
6570: SANBORN-----	Poor	Poor	Good	Good	Good	Fair	Fair	Fair	Fair	Good	Fair	Fair
6632: SARBEN-----	Fair	Good	Good	Fair	Fair	Good	Very poor	Very poor	Good	Fair	Very poor	Good
6633: SARBEN-----	Fair	Good	Good	Fair	Fair	Good	Very poor	Very poor	Good	Fair	Very poor	Good
6634: SARBEN-----	Fair	Good	Good	Fair	Fair	Good	Very poor	Very poor	Good	Fair	Very poor	Good
6635: SARBEN-----	Fair	Good	Good	Fair	Fair	Good	Very poor	Very poor	Good	Fair	Very poor	Good
6700: SATANTA-----	Good	Good	Fair	Good	Good	Fair	Poor	Very poor	Good	Good	Very poor	Fair
6820: SCOVILLE-----	Fair	Good	Fair	Fair	Fair	Poor	Very poor	Very poor	Fair	Fair	Very poor	Very poor
7090: SULCO-----	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
7096: SULCO-----	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
7098: SULCO-----	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
7100: SULCO-----	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
7102: SULCO-----	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
SULCO-----	Fair	Good	Fair	Good	Good	Fair	Poor	Very poor	Fair	Good	Very poor	Fair
7152: TASSEL-----	Very poor	Very poor	Poor	Fair	Fair	Poor	Very poor	Very poor	Very poor	Fair	Very poor	Poor
ASHOLLOW-----	Poor	Fair	Good	Good	Good	Fair	Very poor	Very poor	Fair	Good	Very poor	Fair
ROCK OUTCROP----	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor	Very poor
7461: ULYSSES-----	Good	Good	Fair	Good	Good	Fair	Poor	Very poor	Good	Good	Very poor	Fair
7462: ULYSSES-----	Good	Good	Fair	Good	Good	Fair	Poor	Very poor	Good	Good	Very poor	Fair
7602: VALENT-----	Poor	Fair	Fair	Poor	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor	Fair
7610: VALENT-----	Poor	Fair	Fair	Poor	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor	Fair
7612: VALENT-----	Poor	Fair	Fair	Poor	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor	Fair
7616: VALENT-----	Poor	Fair	Fair	Poor	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor	Fair

WILDLIFE INTERPRETATIONS--Continued
Dundy County, Nebraska

Map symbol and soil name	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Shrubs	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life	Range- land wild- life
7618: VALENT-----	Poor	Fair	Fair	Poor	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor	Fair
VALENT-----	Poor	Fair	Fair	Poor	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor	Fair
9999a: WATER-----	---	---	---	---	---	---	---	---	---	---	---	---

YIELDS PER ACRE OF PASTURE AND HAYLAND
Dundy County, Nebraska

Use and Explanation of Pastureland and Hayland Interpretations

This subsection provides information concerning the suitability of soils for the production of pasture and hayland. This subsection may contain pasture and hayland suitability groupings, land capability and yield estimates, yield estimates for individual grasses or legumes, or other information pertaining to the production of forage.

Pasture and Hayland Suitability Groupings

Soils are placed in pasture and hayland groups according to their suitability for the production of forage. The soils in each group are enough alike to be suited to the same grasses or legumes, to have similar limitations and hazards, to require similar management, and to have similar productivity and other responses to management. Thus, the pasture and hayland suitability group is a convenient way of grouping the soils for their management. If used, these groupings are identified and described in other reports in the subsection.

Yield Estimates

The average yields per acre that can be expected of the principal pasture or hayland crops, under a high level of management, are presented in this subsection. In any given year, yields may be higher or lower than those indicated in the tables because of variations in rainfall or other climatic factors. The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations are also considered.

Under good management, proper grazing is essential for the production of high quality forage, stand survival, and erosion control. Proper grazing helps plants maintain sufficient and generally vigorous top growth during the growing season. Brush control is essential in many areas, and weed control generally is needed. Rotation grazing and renovation are also important management practices.

The Pasture and Hayland table show yield estimates in tons per acre and animal unit months for pasture and hayland groups. An animal unit month is the amount of forage required by one animal unit (AU) for 30 days. On animal unit (AU) is one (1000 pound) mature cow and a calf up to weaning age (usually six months of age) or their equivalent. The Natural Resources Conservation Service uses 900 pounds of air dry forage as the amount needed to meet this requirement. To maintain a healthy and vigorous plant community, the degree of use should never be greater than 50 percent. Therefore only 25 percent of the total biomass grown is considered consumed by the grazing animal. Animal Unit Months can be converted to air dry pounds per acre production by multiplying the AUM by 30 days, then by 30 pounds per day, and then by four. This figure is the amount of total forage production.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil in the Nontechnical Description section. Specific information on plants and yields can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)
Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay	
	N	I	N	I
			Tons	Tons
1331: Bankard-----	6w	4w	---	---
1465: Benkelman-----	2c	2e	---	5.50
1500: Blackwood-----	2c	1	---	6.00
1502: Blackwood-----	2e	2e	---	5.80
1524: Blanche-----	4e	4e	---	2.80
1526: Blanche-----	6e	4e	---	2.60
1700: Bolent-----	6w	---	---	---
Almeria-----	6w	---	---	---
1940: Calamus-----	6s	4s	---	---
2140: Colfer-----	6e	4e	---	3.60
2250: Craft-----	2c	2e	---	5.40
2254: Craft-----	6w	---	---	---
2394: Dailey-----	4e	4e	---	3.60
2630: Duroc-----	2c	1	---	6.00
3280: Haigler-----	4s	4s	---	4.00
4042: Jayem-----	4e	3e	---	4.00
4140: Kanorado-----	4e	4e	---	3.60
4380: Laird-----	4s	4s	---	3.80
4665: Lodgepole-----	3w	4w	---	---
4667: Lodgepole-----	5w	---	---	---
5949: Otero-----	3e	2e	---	3.70
5975: Overlake-----	6e	4e	---	---
6091: Pits-----	8s	---	---	---
6570: Sanborn-----	6s	---	---	---
6632: Sarben-----	4e	3e	---	3.40
6633: Sarben-----	4e	4e	---	3.20
6634: Sarben-----	6e	4e	---	3.00

(Yields in the "N" columns are for nonirrigated soils; those in the "I" columns are for irrigated soils. Yields are those that can be expected under a high level of nonirrigated and irrigated management by component. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)
Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

Map symbol and soil name	Land capability		Alfalfa hay	
	N	I	N	I
			Tons	Tons
6635: Sarben-----	6e	---	---	---
6700: Satanta-----	2e	2e	---	5.20
6820: Scoville-----	4e	4e	---	3.70
7090: Sulco-----	4e	3e	---	4.50
7096: Sulco-----	4e	3e	---	4.80
7098: Sulco-----	4e	4e	---	4.30
7100: Sulco-----	6e	---	---	---
7102: Sulco, eroded-----	7e	---	---	---
Sulco-----	6e	---	---	---
7152: Tassel-----	7s	---	---	---
Ashollow-----	6e	---	---	---
Rock Outcrop-----	8s	---	---	---
7461: Ulysses-----	2e	2e	---	5.60
7462: Ulysses-----	3e	3e	---	5.30
7602: Valent-----	6e	4e	---	---
7610: Valent-----	6e	4e	---	---
7612: Valent-----	6e	4e	---	---
7616: Valent-----	6e	---	---	---
7618: Valent-----	7e	---	---	---
Valent-----	6e	---	---	---
9999a: Water-----	---	---	---	---

CONSERVATION TREE AND SHRUB MANAGEMENT
Dundy County, Nebraska

A Conservation Tree/Shrub Suitability Group (CTSG), formerly Windbreak Suitability Group, is a physiographic unit or area having similar climatic and edaphic characteristics that control the selection and height growth of trees and shrubs.

In this table, the Conservation Tree and Shrub Grouping is expressed as a group index number. The group index for Conservation Tree and Shrub groups (CTSG) are a guide for species best suited for different kinds of soil and for prediction height, growth, and effectiveness. The groupings can be used when selection woody plants for windbreaks, wildlife plantings riparian buffers, reforestation, other environmental plantings, recreation, landscaping, wetland restoration or enhancement and critical area plantings. CTSG's are developed to assure satisfactory species selection and adaptation to specific conditions of soil, climate and physiography. CTSG's are a guide for selection species best suited for different kinds of soil and prediction height growth and effectiveness.

All soil series mapped in the state have been placed in 10 groups of similar soil characteristics. Groups 1, 2, 3, 4, 6, and 9 are further divided into subgroups. In addition, all groups provide information by Major Land Resource Areas.

Each tree or shrub species has certain climatic and physiographic limits. Within these parameters a tree or shrub may be well or poorly suited because of soil characteristics. Each tree or shrub also has definable potentials of height growth depending on the factors just mentioned. Accurate definitions of potential heights are necessary for proper windbreak planning and design.

Windbreaks protect livestock, buildings, roads and yards from wind and snow. They also protect fruit trees and gardens, and they furnish habitat for wildlife. Several rows of low-growing and high-growing broadleaf and coniferous trees and shrubs provide the most protection.

Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field. The interval depends on the erodibility of the soil. Field windbreaks protect cropland and crops from wind, help to keep snow on the fields, and provide food and cover for wildlife.

Environmental plantings help to beautify and screen houses and other buildings and to abate noise. The plants, mostly evergreen shrubs and trees, are closely spaced. To ensure plant survival, a healthy planting stock of suitable species should be planted properly on a well prepared site and maintained in good condition.

Windbreaks are often planted on land that did not grow trees originally. Knowledge of how trees perform on such land can be gained only by observing and recording their performance where trees have been planted and survived. The problem is compounded by the fact that many favorite windbreak species are not indigenous to the areas in which they are planted.

The Kansas Field Office Technical Guide Notice KS-230, Conservation Tree and Shrub Plantings Suitability Groups shows the adapted species listing for each group index number. Showing the height that locally grown trees and shrubs are expected to reach in 20 years on various soils. The estimates are based on measurements and observation of established plantings that have been given adequate care. This information should be used to determine the placement of a windbreak, the area protected and the arrangement of species.

A number of attributes are included in the CTSG species tables for each group number found in this section of the Field Office Technical Guide. These attributes were rated subjectively and assigned a relative value to further assist those unfamiliar with individual species characteristics or desirability for the intended use. Definitions and explanations can be found. Additional information on planning windbreaks and screens and planting and caring for trees and shrubs can be obtained from the local office of the Natural Resources Conservation Service or of the Cooperative Extension Service or from a commercial nursery. See part 537 of the National Forestry Manual for additional information.

In the Tree and Shrub Management table interpretive ratings are given for various aspects of forest and conservation tree and shrub management. Some rating class terms indicate the degree to which the soils are suited to a specified forest management practice. Well suited indicates that the soil has features that are favorable for the specified practice and has no limitations. Good performance can be expected, and little or no maintenance is needed. Moderately well suited indicates that the soil has features that are moderately favorable for the specified practice. One or more soil properties are less than desirable and fair performance can be expected. Some maintenance is needed. Poorly suited indicates that the soil has one or more properties that are unfavorable for the specified practice. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. Unsited indicates that the expected performance of the soil is unacceptable for the specified practice or that extreme measures are needed to overcome the undesirable soil properties.

The paragraphs that follow indicate the soil properties considered in rating the soils for forest and conservation tree and shrub management practices. More detailed information about the criteria used in the ratings is available in the "National Forestry Manual," which is available in local offices of the Natural Resources Conservation Service or on the Internet. Also, in the Kansas Field Office Technical Guide Notice KS-230, Conservation Tree and Shrub Plantings Suitability Groups.

Ratings in the columns suitability for hand planting and suitability for mechanical planting are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, moderately well suited, poorly suited, or unsited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column suitability for mechanical site preparation (surface) are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsited to this management activity. The part of the soil from the surface to a depth of about 1-foot is considered in the ratings.

Ratings in the column suitability for mechanical site preparation (deep) are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

Ratings in the column potential for seedling mortality are based on flooding, ponding, depth to a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. The soils are described as having a low, moderate, or high potential for seedling mortality. See the National Forestry Manual, Subpart B for criteria used in rating management concerns. Specific information on plants and yields can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

CONSERVATION TREE AND SHRUB MANAGEMENT
Dundy County,
Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
1331: Bankard-----	10	Well suited	Well suited	Well suited	Well suited	Moderate Soil reaction
1465: Benkelman-----	2K	Well suited	Well suited	Well suited	Well suited	Moderate Soil reaction
1500: Blackwood-----	3	Well suited	Well suited	Well suited	Well suited	Low
1502: Blackwood-----	3	Well suited	Well suited	Well suited	Well suited	Low
1524: Blanche-----	6D	Well suited	Well suited	Well suited	Well suited	Low
1526: Blanche-----	6D	Well suited	Well suited	Well suited	Well suited	Low
1700: Bolent-----	2K	Well suited	Well suited	Well suited	Well suited	Low
Almeria-----	10	Unsuited	Moderately suited	Unsuited	Unsuited	High
		Wetness	Wetness	Wetness	Wetness	Wetness
1940: Calamus-----	10	Moderately suited	Moderately suited	Well suited	Well suited	Low
		Sandiness	Sandiness			
2140: Colfer-----	7	Well suited	Well suited	Well suited	Well suited	Low
2250: Craft-----	8	Well suited	Well suited	Well suited	Well suited	Moderate Soil reaction
2254: Craft-----	10	Well suited	Well suited	Well suited	Well suited	Moderate Soil reaction
2394: Dailey-----	7	Well suited	Well suited	Well suited	Well suited	Low
2630: Duroc-----	3	Well suited	Well suited	Well suited	Well suited	Low
3280: Haigler-----	1K	Well suited	Well suited	Well suited	Well suited	Moderate Soil reaction Salinity
4042: Jayem-----	3	Well suited	Well suited	Well suited	Well suited	Low
4140: Kanorado-----	4CK	Moderately suited	Moderately suited	Well suited	Well suited	Low
		Stickiness	Slope Stickiness			
4380: Laird-----	8	Well suited	Well suited	Well suited	Well suited	Low
4665: Lodgepole-----	10	Unsuited Wetness	Unsuited Wetness	Unsuited Wetness	Unsuited Wetness	High Wetness
		Stickiness	Stickiness	Stickiness		
4667: Lodgepole-----	10	Unsuited Wetness	Unsuited Wetness	Unsuited Wetness	Unsuited Wetness	High Wetness
		Stickiness	Stickiness	Stickiness		
5949: Otero-----	8	Well suited	Well suited	Well suited	Well suited	Low
5975: Overlake-----	7	Moderately suited	Moderately suited	Well suited	Well suited	Low
		Sandiness	Sandiness			
6091: Pits-----	10	Not rated	Not rated	Not rated	Not rated	Not rated
6570: Sanborn-----	9W	Well suited	Well suited	Well suited	Well suited	Moderate Soil reaction Salinity
6632: Sarben-----	3	Well suited	Well suited	Well suited	Well suited	Low
6633: Sarben-----	3	Well suited	Well suited	Well suited	Well suited	Low
6634: Sarben-----	3	Well suited	Moderately suited	Well suited	Well suited	Low
			Slope			
6635: Sarben-----	3	Well suited	Poorly suited	Poorly suited	Poorly suited	Low

CONSERVATION TREE AND SHRUB MANAGEMENT
Dundy County,
Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. Pines and spruces are prone to disease problems. See text for further explanation of ratings in this table.)

Map symbol and soil name	Wind break Group	Suitability for hand planting	Suitability for mechanical planting	Suitability for mechanical site preparation (surface)	Suitability for mechanical site preparation (deep)	Potential for seedling mortality
		Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features	Rating class and limiting features
6700: Satanta-----	3	Well suited	Slope Well suited	Slope Well suited	Slope Well suited	Low
6820: Scoville-----	7	Well suited	Well suited	Well suited	Well suited	High Available water
7090: Sulco-----	8	Well suited	Well suited	Well suited	Well suited	Low
7096: Sulco-----	8	Well suited	Well suited	Well suited	Well suited	Low
7098: Sulco-----	8	Well suited	Moderately suited Slope	Well suited	Well suited	Low
7100: Sulco-----	8	Well suited	Poorly suited Slope	Poorly suited Slope	Poorly suited Slope	Low
7102: Sulco, eroded-----	8	Moderately suited Slope	Unsuited	Unsuited	Unsuited	Low
Sulco-----	8	Well suited	Slope Poorly suited Slope	Slope Poorly suited Slope	Slope Poorly suited Slope	Low
7152: Tassel-----	10	Moderately suited Restrictive layer Rock fragments Slope	Unsuited Slope Rock fragments	Unsuited Slope Rock fragments	Unsuited Slope	Low
Ashollow-----	10	Well suited	Poorly suited Slope	Poorly suited Slope	Poorly suited Slope	Moderate Soil reaction
Rock Outcrop-----	10	Not rated	Not rated	Not rated	Not rated	Not rated
7461: Ulysses-----	3	Well suited	Well suited	Well suited	Well suited	Low
7462: Ulysses-----	3	Well suited	Well suited	Well suited	Well suited	Low
7602: Valent-----	7	Well suited	Moderately suited Slope	Well suited	Well suited	Low
7610: Valent-----	7	Well suited	Well suited	Well suited	Well suited	Low
7612: Valent-----	7	Well suited	Moderately suited Slope	Well suited	Well suited	Low
7616: Valent-----	7	Well suited	Poorly suited Slope	Poorly suited Slope	Poorly suited Slope	Low
7618: Valent-----	7	Moderately suited Slope	Unsuited	Unsuited	Unsuited	Low
Valent-----	7	Well suited	Slope Poorly suited Slope	Slope Poorly suited Slope	Slope Poorly suited Slope	Low
9999a: Water-----		Not rated	Not rated	Not rated	Not rated	Not rated

ENGINEERING INDEX PROPERTIES
Dundy County, Nebraska

Engineering Index Properties table gives the engineering classifications and the range of index properties for the layers of each soil in the survey area. Depth to the upper and lower boundaries of each layer is indicated. Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. Loam, for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, gravelly. Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system (ASTM, 1998) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 1998). The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection. If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest. The AASHTO classification for soils tested, with group index numbers in parentheses, is given in Engineering Index Properties table.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage. Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an oven-dry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and plasticity index (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination. The estimates of particle-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is generally omitted in the table.

ENGINEERING INDEX PROPERTIES--Continued
Dundy County, Nebraska

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct						
	In				Pct	Pct					Pct	
1331: Bankard-----	0-5	Loamy sand	SM	A-2	0	0	100	90-100	50-75	15-30	15-25	NP-10
	5-60	Sand	SM	A-2	0	0	100	90-100	50-70	5-35	0-0	NP
1465: Benkelman-----	0-4	Very fine sandy loam	CL-ML, ML	A-4	0	0	100	100	85-95	50-65	15-30	NP-10
	4-11	Very fine sandy loam	CL-ML, ML	A-4	0	0	100	100	85-95	50-65	15-30	NP-10
	11-22	Very fine sandy loam	CL-ML, ML	A-4	0	0	100	100	85-95	50-65	15-30	NP-10
	22-34	Very fine sandy loam	CL-ML, ML	A-4	0	0	100	100	85-95	50-65	15-30	NP-10
	34-46	Very fine sandy loam	CL-ML, ML	A-4	0	0	100	100	85-95	50-65	15-30	NP-10
	46-80	Very fine sandy loam	CL-ML, ML	A-4	0	0	100	100	85-95	50-65	15-30	NP-10
1500: Blackwood-----	0-6	Loam	CL	A-4	0	0	100	100	85-95	60-75	20-35	5-10
	6-14	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	20-35	5-15
	14-23	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	20-35	5-15
	23-28	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	20-35	5-15
	28-34	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	20-35	5-15
	34-43	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	20-35	5-15
	43-80	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	20-35	5-15
1502: Blackwood-----	0-8	Loam	CL	A-4	0	0	100	100	85-95	60-75	20-35	5-10
	8-18	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	20-35	5-10
	18-32	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	20-35	5-10
	32-48	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	20-35	5-10
	48-80	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	20-35	5-10
1524: Blanche-----	0-7	Loamy sand	SM	A-2, A-4	0	0	100	90-100	50-75	15-30	15-25	NP-10
	7-19	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	19-22	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	22-80	Weathered bedrock			---	---	---	---	---	---	---	---
1526: Blanche-----	0-7	Loamy sand	SM	A-2, A-4	0	0	100	90-100	50-75	15-30	15-25	NP-10
	7-10	Fine sandy loam	SM, CL-ML, SC-SM, ML	A-2, A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	10-22	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	22-28	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	28-80	Weathered bedrock			---	---	---	---	---	---	---	---
1700: Bolent-----	0-6	Loamy sand	SM	A-2, A-3	0	0	100	90-100	50-75	15-30	15-25	NP-10
	6-30	Sand	SP-SM, SM	A-1, A-2, A-3	0	0	100	90-100	50-70	5-35	0-0	NP
	30-80	Stratified sand	SP-SM, SM	A-1, A-2, A-3	0	0	100	90-100	50-70	5-35	0-0	NP
Almeria-----	0-2	Loam	CL	A-4	0	0	100	100	85-95	60-75	20-35	5-15
	2-8	Stratified fine sandy loam to sand	SM, SP-SM, SC-SM, ML	A-2, A-3, A-4	0	0	100	90-100	50-85	5-55	15-25	NP-10
	8-36	Stratified loamy fine sand	SM	A-2, A-3, A-4	0	0	100	90-100	65-80	20-35	15-25	NP-10
	36-80	Stratified sand	SP-SM, SM	A-2, A-3, A-4	0	0	100	90-100	50-70	5-35	0-0	NP
1940: Calamus-----	0-5	Coarse sand	SP, GW	A-2, A-3	0	0	70-100	50-95	25-65	0-15	0-0	NP
	5-11	Stratified sand	SP-SM, SM	A-2, A-3	0	0	100	90-100	50-70	5-35	0-0	NP
	11-30	Stratified sand	SP-SM, SM		0	0	100	90-100	50-70	5-35	0-0	NP
	30-52	Sand	SP-SM, SM		0	0	100	90-100	50-70	5-35	0-0	NP
	52-80	Coarse sand	SP, GW	A-1, A-2, A-3	0	0	70-100	50-95	25-65	0-15	0-0	NP
2140: Colfer-----	0-7	Sand	SP-SM, SM	A-2, A-3	0	0	100	90-100	50-70	5-35	0-0	NP
	7-24	Sand	SP-SM, SM	A-2, A-3	0	0	100	90-100	50-70	5-35	0-0	NP
	24-43	Loamy sand	SM	A-2, A-3	0	0	100	90-100	50-75	15-30	15-25	NP-10
	43-50	Loamy sand	SM	A-2, A-3	0	0	100	90-100	50-75	15-30	15-25	NP-10
	50-54	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	54-80	Loamy sand	SM	A-2, A-4	0	0	100	90-100	50-75	15-30	15-25	NP-10
2250: Craft-----	0-6	Very fine sandy loam	CL-ML, ML, CL	A-4	0	0	100	100	85-95	50-65	15-30	NP-10
	6-38	Very fine sandy loam	CL-ML, ML, CL	A-4	---	---	100	100	85-95	50-65	15-30	NP-10
	38-80	Stratified very fine sandy loam	CL-ML, ML, CL	A-4	0	0	100	100	85-95	50-65	15-30	NP-10

ENGINEERING INDEX PROPERTIES--Continued
Dundy County, Nebraska

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct					Pct	
2254: Craft-----	In											
	0-3	Stratified very fine sandy loam	CL-ML, ML, CL	A-4	0	0	100	100	85-95	50-65	15-30	NP-10
	3-27	Stratified very fine sandy loam	CL-ML, ML, CL	A-4	---	---	100	100	85-95	50-65	15-30	NP-10
	27-80	Stratified very fine sandy loam	CL-ML, ML, CL	A-4	0	0	100	100	85-95	50-65	15-30	NP-10
2394: Dailey-----	0-7	Loamy sand	SM	A-2, A-4	0	0	100	90-100	50-75	15-30	15-25	NP-10
	7-15	Loamy sand	SM	A-2, A-4	0	0	100	90-100	50-75	15-30	15-25	NP-10
	15-80	Sand	SM	A-2, A-3	0	0	100	90-100	50-70	5-35	0-0	NP
2630: Duroc-----	0-7	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	20-35	5-15
	7-25	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	20-35	5-15
	25-33	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	20-35	5-15
	33-80	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	20-35	5-15
3280: Haigler-----	0-5	Very fine sandy loam	CL	A-4	0	0	100	100	85-95	60-75	15-30	NP-10
	5-10	Very fine sandy loam	CL	A-4	0	0	100	100	85-95	60-75	15-30	NP-10
	10-16	Loam	CL-ML, CL	A-4	0	0	100	100	85-95	60-75	20-35	5-15
	16-27	Stratified loamy fine sand	SM	A-2, A-4	0	0	100	90-100	60-80	20-35	15-25	NP-10
	27-43	Stratified loamy very fine sand	SM, CL-ML	A-2, A-4	0	0	100	100	60-100	35-65	15-25	NP-10
	43-80	Fine sand	SP-SM, SM	A-2, A-4	0	0	100	90-100	65-80	20-35	0-0	NP
4042: Jayem-----	0-5	Loamy sand	SM	A-2	0	0	100	90-100	50-75	15-30	15-25	NP-10
	5-14	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-2	0	0	100	100	70-85	40-55	15-30	NP-10
	14-29	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-4, A-2	0	0	100	100	70-85	40-55	15-30	NP-10
	29-80	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-2, A-4	0	0	100	100	70-85	40-55	15-30	NP-10
4140: Kanorado-----	0-6	Silty clay loam	CL	A-6	0	0	100	100	95-100	85-95	35-50	15-25
	6-11	Silty clay loam	CL	A-6	0	0	100	100	95-100	85-95	35-50	15-25
	11-16	Silty clay loam	CL	A-6	0	0	100	100	95-100	85-95	35-50	15-25
	16-24	Silty clay	CH, CL	A-6	0	0	100	100	95-100	90-95	50-70	25-40
	24-36	Silty clay loam	CL	A-6	0	0	100	100	95-100	85-95	35-50	15-25
	36-44	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-95	35-50	15-25
	44-80	Weathered bedrock			---	---	---	---	---	---	---	---
4380: Laird-----	0-7	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	7-10	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	10-16	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	16-28	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	28-36	Fine sandy loam	CL-ML, CL	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	36-45	Loam	SC-SM, ML, CL-ML, SM	A-4	0	0	100	100	85-95	60-75	20-35	5-10
	45-55	Sandy clay loam	SC, CL	A-4	0	0	100	100	80-90	35-45	15-30	10-20
	55-80	Loam	SC, CL	A-2, A-4	0	0	100	100	85-95	60-75	20-35	5-10
4665: Lodgepole-----	0-5	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	35-50	15-25
	5-9	Silty clay	CH, CL	A-7	0	0	100	100	95-100	85-95	50-70	25-40
	9-24	Silty clay	CH, CL	A-7	0	0	100	100	95-100	85-95	50-70	25-40
	24-38	Silty clay	CH, CL	A-7	0	0	100	100	95-100	85-95	50-70	25-40
	38-45	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-95	35-50	15-25
	45-54	Silty clay loam	CL	A-4	0	0	100	100	95-100	85-95	35-50	15-25
	54-80	Silt loam	CL	A-2, A-4	0	0	100	100	90-100	70-90	25-35	5-15
4667: Lodgepole-----	0-5	Silty clay loam	CL	A-6, A-7	0	0	100	100	95-100	85-95	35-50	15-25
	5-14	Silty clay	CH, CL	A-7	0	0	100	100	95-100	85-95	50-70	25-40
	14-36	Silty clay	CH, CL	A-7	0	0	100	100	95-100	85-95	50-70	25-40
	36-45	Silty clay loam	CL	A-7	0	0	100	100	95-100	85-95	35-50	15-25
	45-50	Silty clay loam	CL	A-4	0	0	100	100	95-100	85-95	35-50	15-25
	50-80	Silt loam	CL	A-2, A-4	0	0	100	100	90-100	70-90	25-35	5-15
5949: Otero-----	0-7	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	7-55	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	55-80	Sandy loam	SM, ML	A-4	0	0	100	100	60-70	30-40	15-30	NP-10

ENGINEERING INDEX PROPERTIES--Continued
Dundy County, Nebraska

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct						
5975: Overlake-----	In											
	0-6	Sand	SP-SM, SM	A-2, A-3	0	0	100	90-100	50-70	5-35	0-0	NP
	6-31	Sand	SP-SM, SM	A-2, A-3	0	0	100	90-100	50-70	5-35	0-0	NP
	31-45	Very fine sandy loam	ML, CL-ML	A-4	0	0	100	100	85-95	50-65	15-30	NP-10
	45-80	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
6091: Pits-----	0-80	Gravelly sand	GP-GM, GM, SP-SM, GW, SM	A-1, A-2, A-3	---	0-5	45-100	45-55	0-80	0-40	0-0	NP
6570: Sanborn-----	0-5	Loam	CL-ML, CL	A-4, A-6	0	0	100	100	85-95	60-75	20-30	5-15
	5-10	Loam	CL-ML, CL	A-2, A-4	0	0	100	100	85-95	60-75	20-35	5-10
	10-25	Stratified loam	CL-ML, CL	A-1, A-3	0	0	100	100	85-95	60-75	20-30	5-15
	25-40	Very fine sandy loam	ML, CL-ML	A-1, A-3	0	0	100	100	85-95	50-65	15-30	NP-10
	40-50	Sand	SP-SM, SM	A-1, A-3	0	0	100	90-100	50-70	5-35	0-0	NP
	50-80	Sand	SP-SM, SM	A-1, A-3	0	0	100	90-100	50-70	5-35	0-0	NP
6632: Sarben-----	0-6	Loamy sand	SM	A-2	0	0	100	90-100	50-75	15-30	15-25	NP-10
	6-16	Fine sandy loam	ML, SM, CL- ML, SC-SM	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	16-30	Fine sandy loam	ML, SM, CL- ML, SC-SM	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	30-48	Fine sandy loam	ML, SM, CL- ML, SC-SM	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	48-80	Fine sandy loam	SC-SM, SM, ML, SC	A-2	0	0	100	100	70-85	40-55	15-30	NP-10
6633: Sarben-----	0-6	Loamy sand	SM	A-2	0	0	100	90-100	50-75	15-30	15-25	NP-10
	6-16	Fine sandy loam	ML, SM, CL- ML, SC-SM	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	16-38	Fine sandy loam	ML, SM, CL- ML, SC-SM	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	38-63	Fine sandy loam	ML, SM, CL- ML, SC-SM	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	63-80	Loamy sand	SM	A-2	0	0	100	90-100	50-75	15-30	15-30	NP-10
6634: Sarben-----	0-6	Loamy sand	SM, ML, SC- SM, SC	A-2	0	0	100	90-100	50-75	15-30	15-25	NP-10
	6-16	Fine sandy loam	ML, SM, CL- ML, SC-SM	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	16-34	Fine sandy loam	ML, SM, CL- ML, SC-SM	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	34-53	Fine sandy loam	ML, SM, CL- ML, SC-SM	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	53-80	Fine sandy loam	SC-SM, SM, ML, CL-ML	A-2	0	0	100	100	70-85	40-55	15-30	NP-10
6635: Sarben-----	0-6	Loamy sand	SM	A-2	0	0	100	90-100	50-75	15-30	15-25	NP-10
	6-11	Loamy sand	SM	A-4	0	0	100	90-100	50-75	15-30	15-25	NP-10
	11-17	Fine sandy loam	ML, SM, CL- ML, SC-SM	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	17-38	Fine sandy loam	ML, SM, CL- ML, SC-SM	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	38-48	Fine sand	SC-SM, SM, ML, SP-SM	A-2	0	0	100	90-100	65-80	15-35	0-0	NP
	48-80	Fine sand	SP-SM, SM	A-2	0	0	100	90-100	65-80	15-35	0-0	NP
6700: Satanta-----	0-6	Fine sandy loam	CL-ML, ML, SC-SM, SM	A-4	0	0	100	100	70-85	40-55	15-30	NP-10
	6-16	Loam	CL	A-4	0	0	100	100	85-95	60-75	20-35	5-10
	16-24	Loam	CL	A-6, A-7	0	0	100	100	85-95	60-75	20-35	5-10
	24-29	Loam	CL	A-7, A-6	0	0	100	100	85-95	60-75	20-35	5-10
	29-46	Loam	CL	A-4	0	0	100	100	85-95	60-75	20-35	5-10
	46-80	Very fine sandy loam	ML, CL-ML	A-4	0	0	100	100	85-95	50-65	15-30	NP-10
6820: Scoville-----	0-7	Loamy sand	SM	A-2	0	0	100	90-100	50-75	15-30	15-25	NP-10
	7-39	Sand	SP-SM, SM	A-2, A-3	0	0	100	90-100	50-70	5-35	0-0	NP
	39-44	Loamy sand	SM	A-2, A-3	0	0	100	90-100	50-75	15-30	15-25	NP-10
	44-57	Very fine sandy loam	ML, CL-ML	A-4	0	0	100	100	85-95	50-65	15-30	NP-10
	57-70	Very fine sandy loam	ML, CL-ML	A-4	0	0	100	100	85-95	50-65	15-30	NP-10
	70-80	Very fine sandy loam	ML, CL-ML	A-4	0	0	100	100	85-95	50-65	15-30	NP-10
7090: Sulco-----	0-6	Fine sandy loam	SM, SC-SM	A-2	0	0	100	100	70-85	40-55	15-30	NP-10
	6-9	Loam	CL	A-4	0	0	100	100	85-95	60-75	20-35	5-10
	9-24	Loam	CL	A-4	0	0	100	100	85-95	60-75	20-35	5-10
	24-80	Very fine sandy loam	ML, CL-ML	A-4	0	0	100	100	85-95	50-65	15-30	NP-10
7096: Sulco-----	0-6	Loam	CL-ML, CL	A-4	0	0	100	100	85-95	60-75	20-35	5-10
	6-17	Loam	CL, CL-ML	A-4	0	0	100	100	85-95	60-75	20-35	5-10
	17-80	Loam	CL, CL-ML	A-4	0	0	100	100	85-95	60-75	20-35	5-10

ENGINEERING INDEX PROPERTIES--Continued
Dundy County, Nebraska

(Absence of an entry indicates that the data were not estimated.)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
					Pct	Pct					Pct	
7098: Sulco-----	0-4	Loam	CL-ML, CL	A-4	0	0	100	100	85-95	60-75	20-35	5-10
	4-13	Loam	CL, CL-ML	A-4	0	0	100	100	85-95	60-75	20-35	5-10
	13-80	Loam	CL, CL-ML	A-4	0	0	100	100	85-95	60-75	20-35	5-10
7100: Sulco-----	0-3	Loam	CL-ML, CL	A-4	0	0	100	100	85-95	60-75	20-35	5-10
	3-6	Loam	CL, CL-ML	A-4	0	0	100	100	85-95	60-75	20-35	5-10
	6-16	Loam	CL, CL-ML	A-4	0	0	100	100	85-95	60-75	20-35	5-10
	16-27	Loam	CL, CL-ML	A-4	0	0	100	100	85-95	60-75	20-35	5-10
	27-80	Loam	CL, CL-ML	A-4	0	0	100	100	85-95	60-75	20-35	5-10
7102: Sulco, eroded--	0-5	Loam	CL-ML, CL	A-4	0	0	100	100	85-95	60-75	20-35	5-10
	5-20	Loam	CL, CL-ML	A-4	0	0	100	100	85-95	60-75	20-35	5-10
	20-80	Loam	CL, CL-ML	A-4	0	0	100	100	85-95	60-75	20-35	5-10
Sulco-----	0-3	Loam	ML, CL-ML, CL	A-2	0	0	100	100	85-95	60-75	15-30	5-10
	3-6	Loam	CL, CL-ML, ML	A-4	0	0	100	100	85-95	60-75	15-30	5-10
	6-16	Loam	CL, CL-ML, ML	A-4	0	0	100	100	85-95	60-75	15-30	5-10
	16-27	Loam	CL, CL-ML, ML	A-4	0	0	100	100	85-95	60-75	15-30	5-10
	27-80	Loam	CL, CL-ML, ML	A-4	0	0	100	100	85-95	60-75	15-30	5-10
7152: Tassel-----	0-4	Sandy loam	SM, ML	A-2, A-4	0	0	100	90-100	60-70	30-40	15-30	NP-10
	4-9	Sandy loam	SM, ML	A-2, A-4	0	0	100	90-100	60-70	30-40	15-30	NP-10
	9-80	Weathered bedrock			---	---	---	---	---	---	---	---
Ashollow-----	0-6	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-1-b, A-2, A-4, A-6	0	0	100	100	70-85	40-55	15-30	NP-10
	6-11	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-1-b, A-2, A-4, A-6	0	0	100	100	70-85	40-55	15-30	NP-10
	11-36	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-2, A-4, A-6	0	0	100	100	70-85	40-55	15-30	NP-10
	36-80	Fine sandy loam	SM, SC-SM, ML, CL-ML	A-2, A-4, A-6	0	0	100	100	70-85	40-55	15-30	NP-10
Rock Outcrop---	0-80	Unweathered bedrock			---	---	---	---	---	---	---	---
7461: Ulysses-----	0-5	Loam	CL	A-4	0	0	100	100	85-95	60-75	20-35	5-10
	5-9	Loam	CL	A-4	0	0	100	100	85-95	60-75	20-35	5-10
	9-15	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	20-35	5-10
	15-23	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	20-35	5-10
	23-48	Loam	CL	A-4	0	0	100	100	85-95	60-75	20-35	5-10
	48-80	Very fine sandy loam	CL-ML, CL	A-4	0	0	100	100	85-95	50-65	20-30	5-10
7462: Ulysses-----	0-5	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	20-35	5-10
	5-12	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	20-35	5-10
	12-24	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	20-35	5-10
	24-44	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	20-35	5-10
	44-60	Loam	CL	A-4, A-6	0	0	100	100	85-95	60-75	20-35	5-10
7602: Valent-----	0-5	Loamy sand	SM	A-2	0	0	100	90-100	50-75	15-30	15-30	NP-10
	5-9	Sand	SP-SM, SM	A-3	0	0	100	90-100	50-70	5-35	0-0	NP
	9-80	Sand	SP-SM, SM	A-3	0	0	100	90-100	50-70	5-35	0-0	NP
7610: Valent-----	0-7	Sand	SP-SM, SM	A-2	0	0	100	90-100	50-70	5-35	0-0	NP
	7-10	Sand	SP-SM, SM	A-3	0	0	100	90-100	50-70	5-35	0-0	NP
	10-60	Sand	SP-SM, SM	A-3	0	0	100	90-100	50-70	5-35	0-0	NP
7612: Valent-----	0-4	Sand	SP-SM, SM	A-2	0	0	100	90-100	50-70	5-35	0-0	NP
	4-9	Sand	SP-SM, SM	A-3	0	0	100	90-100	50-70	5-35	0-0	NP
	9-80	Sand	SP-SM, SM	A-3	0	0	100	90-100	50-70	5-35	0-0	NP
7616: Valent-----	0-5	Sand	SP-SM, SM	A-2	0	0	100	90-100	50-70	5-35	0-0	NP
	5-9	Sand	SP-SM, SM	A-3	0	0	100	90-100	50-70	5-35	0-0	NP
	9-80	Sand	SP-SM, SM	A-3	0	0	100	90-100	50-70	5-35	0-0	NP
7618: Valent-----	0-3	Sand	SP-SM, SM, SP	A-2	0	0	100	90-100	50-70	5-35	0-0	NP
	3-60	Sand	SP-SM, SM, SP	A-3	0	0	100	90-100	50-70	5-35	0-0	NP
Valent-----	0-3	Sand	SP-SM, SM	A-2	0	0	100	90-100	50-70	5-35	0-0	NP
	3-60	Sand	SP-SM, SM	A-3	0	0	100	90-100	50-70	5-35	0-0	NP
9999a: Water-----	---	---	---	---	---	---	---	---	---	---	---	---

Physical Properties

This table shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In this table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In this table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at 1/3- or 1/10-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Saturated hydraulic conductivity refers to the ability of a soil to transmit water or air. The term "permeability," as used in soil surveys, indicates saturated hydraulic conductivity (K-sat). The estimates in the table indicate the rate of water movement, in micrometers per second (um/sec), when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In this table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in this table as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are as follows:

1. Coarse sands, sands, fine sands, and very fine sands.

PHYSICAL PROPERTIES OF THE SOILS
Dundy County, Nebraska: Update

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(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
	In	Pct	Pct	Pct	g/cc	in/hr	In/in	Pct	Pct					

2. Loamy coarse sands, loamy sands, loamy fine sands, loamy very fine sands, ash material, and sapric soil material.

3. Coarse sandy loams, sandy loams, fine sandy loams, and very fine sandy loams.

4L. Calcareous loams, silt loams, clay loams, and silty clay loams.

4. Clays, silty clays, noncalcareous clay loams, and silty clay loams that are more than 35 percent clay.

5. Noncalcareous loams and silt loams that are less than 20 percent clay and sandy clay loams, sandy clays, and hemic soil material.

6. Noncalcareous loams and silt loams that are more than 20 percent clay and noncalcareous clay loams that are less than 35 percent clay.

7. Silts, noncalcareous silty clay loams that are less than 35 percent clay, and fibric soil material.

8. Soils that are not subject to wind erosion because of coarse fragments on the surface or because of surface wetness.

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

PHYSICAL PROPERTIES OF THE SOILS
Dundy County, Nebraska: Update

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Permea- bility (Ksat)	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
1331: Bankard-----	0-5 5-60	82 95	9 1	3-15 1-7	1.35-1.55 1.60-1.80	6.00-20.00 6.00-20.00	0.10-0.12 0.05-0.07	0.0-2.9 0.0-2.9	0.0-1.0 0.0-0.5	.17 .15	.17 .15	4	2	134
1465: Benkelman----	0-4 4-11 11-22 22-34 34-46 46-80	61 61 61 61 61 61	27 27 27 27 27 27	5-18 5-18 5-18 5-18 5-18 5-18	1.20-1.40 1.40-1.65 1.40-1.65 1.40-1.65 1.40-1.65 1.40-1.65	0.60-2.00 0.60-2.00 0.60-2.00 0.60-2.00 0.60-2.00 0.60-2.00	0.17-0.19 0.17-0.19 0.16-0.18 0.16-0.18 0.16-0.18 0.16-0.18	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	0.0-1.0 0.0-0.5 0.0-0.5 0.0-0.5 0.0-0.5 0.0-0.5	.37 .43 .43 .43 .43 .43	.37 .43 .43 .43 .43 .43	5	3	86
1500: Blackwood----	0-6 6-14 14-23 23-28 28-34 34-43 43-80	33 33 33 33 33 33 33	44 44 44 44 44 44 44	18-27 18-27 18-27 18-27 18-27 18-27 18-27	1.25-1.45 1.45-1.65 1.45-1.65 1.45-1.65 1.45-1.65 1.45-1.65 1.45-1.65	0.60-2.00 0.60-2.00 0.60-2.00 0.60-2.00 0.60-2.00 0.60-2.00 0.60-2.00	0.20-0.22 0.20-0.22 0.17-0.19 0.17-0.19 0.17-0.19 0.17-0.19 0.17-0.19	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	1.0-3.0 1.0-3.0 1.0-2.0 1.0-2.0 1.0-2.0 1.0-1.0 0.0-0.5	.28 .28 .28 .28 .28 .28 .28	.28 .28 .28 .28 .28 .28 .28	5	5	56
1502: Blackwood----	0-8 8-18 18-32 32-48 48-80	33 33 33 33 33	44 44 44 44 44	18-27 18-27 18-27 18-27 18-27	1.25-1.45 1.45-1.65 1.45-1.65 1.45-1.65 1.45-1.65	0.60-2.00 0.60-2.00 0.60-2.00 0.60-2.00 0.60-2.00	0.20-0.22 0.20-0.22 0.17-0.19 0.17-0.19 0.17-0.19	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	1.0-3.0 1.0-3.0 1.0-2.0 1.0-2.0 1.0-2.0	.28 .28 .28 .28 .28	.28 .28 .28 .28 .28	5	5	56
1524: Blanche-----	0-7 7-19 19-22 22-80	82 62 62 62	9 26 26 26	3-15 5-18 5-18 ---	1.35-1.55 1.50-1.70 1.50-1.70 ---	6.00-20.00 2.00-6.00 2.00-6.00 0.06-0.20	0.10-0.12 0.15-0.17 0.15-0.17 ---	0.0-2.9 0.0-2.9 0.0-2.9 ---	1.0-2.0 0.0-1.0 0.0-0.5 ---	.17 .28 .28 ---	.17 .28 .28 ---	3	2	134
1526: Blanche-----	0-7 7-10 10-22 22-28 28-80	82 62 62 62 62	9 26 26 26 26	3-15 5-18 5-18 5-18 ---	1.35-1.55 1.50-1.70 1.50-1.70 1.50-1.70 ---	6.00-20.00 2.00-6.00 2.00-6.00 2.00-6.00 0.06-0.20	0.10-0.12 0.10-0.12 0.15-0.17 0.15-0.17 ---	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9 ---	1.0-2.0 1.0-2.0 0.0-1.0 0.0-0.5 ---	.17 .17 .28 .28 ---	.17 .17 .28 .28 ---	3	2	134
1700: Bolent-----	0-6 6-30 30-80	82 95 95	9 1 1	3-15 1-7 1-7	1.35-1.55 1.60-1.80 1.60-1.80	6.00-20.00 6.00-20.00 6.00-20.00	0.10-0.12 0.05-0.07 0.05-0.07	0.0-2.9 0.0-2.9 0.0-2.9	0.0-1.0 0.0-0.5 0.0-0.5	.17 .15 .15	.17 .15 .15	3	2	134
Almeria-----	0-2 2-8 8-36 36-80	46 64 84 95	42 27 6 1	7-18 1-15 3-15 1-7	1.25-1.45 1.55-1.80 1.55-1.75 1.60-1.80	0.60-2.00 2.00-20.00 6.00-20.00 6.00-20.00	0.20-0.22 0.12-0.14 0.09-0.11 0.05-0.07	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	1.0-3.0 0.0-0.5 0.0-0.5 0.0-0.5	.32 .17 .17 .15	.32 .17 .17 .15	5	8	0
1940: Calamus-----	0-5 5-11 11-30 30-52 52-80	91 95 95 95 91	6 1 1 1 6	1-5 1-7 1-7 1-7 1-5	1.45-1.65 1.60-1.80 1.60-1.80 1.60-1.80 1.65-1.85	20.00-20.00 6.00-20.00 6.00-20.00 6.00-20.00 20.00-20.00	0.04-0.06 0.07-0.09 0.05-0.07 0.05-0.07 0.02-0.04	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	0.0-1.0 0.0-0.5 0.0-0.5 0.0-0.5 0.0-0.5	.10 .15 .15 .15 .10	.10 .15 .15 .15 .10	5	1	160
2140: Colfer-----	0-7 7-24 24-43 43-50 50-54 54-80	95 95 82 82 67 82	1 1 9 9 20 9	1-7 1-7 3-15 3-15 5-18 3-15	1.40-1.60 1.60-1.80 1.55-1.75 1.55-1.75 1.50-1.70 1.55-1.75	6.00-20.00 6.00-20.00 6.00-20.00 6.00-20.00 2.00-6.00 6.00-20.00	0.07-0.09 0.07-0.09 0.08-0.11 0.08-0.11 0.12-0.16 0.08-0.10	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	0.0-1.0 0.0-0.5 0.0-0.5 0.0-0.5 0.0-0.5 0.0-0.5	.15 .15 .17 .17 .28 .17	.15 .15 .17 .17 .28 .17	5	1	250
2250: Craft-----	0-6 6-38 38-80	61 61 61	28 28 28	5-18 5-18 5-18	1.20-1.40 1.40-1.65 1.40-1.65	0.60-2.00 0.60-2.00 0.60-2.00	0.17-0.19 0.16-0.18 0.16-0.18	0.0-2.9 0.0-2.9 0.0-2.9	0.0-1.0 0.0-0.5 0.0-0.5	.37 .43 .43	.37 .43 .43	5	3	86
2254: Craft-----	0-3 3-27 27-80	61 61 61	28 28 28	5-18 5-18 5-18	1.20-1.40 1.40-1.65 1.40-1.65	0.60-2.00 0.60-2.00 0.60-2.00	0.17-0.19 0.16-0.18 0.16-0.18	0.0-2.9 0.0-2.9 0.0-2.9	0.0-1.0 0.0-0.5 0.0-0.5	.37 .43 .43	.37 .43 .43	5	3	86
2394: Dailey-----	0-7 7-15 15-80	82 82 95	9 9 1	3-15 3-15 1-7	1.35-1.55 1.55-1.75 1.60-1.80	6.00-20.00 6.00-20.00 6.00-20.00	0.10-0.12 0.09-0.11 0.05-0.07	0.0-2.9 0.0-2.9 0.0-2.9	1.0-2.0 0.5-1.5 0.0-0.5	.17 .17 .15	.17 .17 .15	5	2	134
2630: Duroc-----	0-7 7-25 25-33 33-80	41 33 33 33	42 44 44 44	15-20 18-27 18-27 18-27	1.25-1.45 1.25-1.45 1.45-1.65 1.45-1.65	0.60-2.00 0.60-2.00 0.60-2.00 0.60-2.00	0.20-0.22 0.20-0.22 0.17-0.19 0.17-0.19	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	1.0-3.0 1.0-3.0 0.0-1.0 0.0-0.5	.28 .28 .28 .28	.28 .28 .28 .28	5	5	56
3280: Haigler-----	0-5 5-10 10-16 16-27 27-43 43-80	63 63 46 84 79 95	25 25 42 6 12 1	5-18 5-18 7-18 3-15 3-15 1-7	1.20-1.40 1.40-1.65 1.45-1.65 1.55-1.75 1.55-1.75 1.60-1.80	0.60-2.00 0.60-2.00 0.60-2.00 6.00-20.00 6.00-20.00 6.00-20.00	0.17-0.19 0.17-0.19 0.17-0.19 0.09-0.11 0.09-0.11 0.05-0.07	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	0.0-1.0 0.0-0.5 0.0-0.5 0.0-0.5 0.0-0.5 0.0-0.5	.37 .43 .37 .17 .28 .15	.37 .43 .37 .17 .28 .15	5	3	86
4042: Jayem-----	0-5 5-14 14-29 29-80	82 62 62 62	9 26 26 26	3-15 5-18 5-18 5-18	1.35-1.55 1.50-1.70 1.50-1.70 1.50-1.70	6.00-20.00 2.00-6.00 2.00-6.00 2.00-6.00	0.10-0.12 0.16-0.18 0.15-0.17 0.12-0.16	0.0-2.9 0.0-2.9 0.0-2.9 0.0-2.9	1.0-2.0 1.0-2.0 0.0-1.0 0.0-0.5	.17 .20 .28 .28	.17 .20 .28 .28	5	2	134

PHYSICAL PROPERTIES OF THE SOILS
Dundy County, Nebraska: Update

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth In	Sand Pct	Silt Pct	Clay Pct	Moist bulk density g/cc	Permea- bility (Ksat) in/hr	Available water capacity In/in	Linear extensi- bility Pct	Organic matter Pct	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
4140: Kanorado-----	0-6	17	48	30-40	1.05-1.25	0.20-0.60	0.21-0.23	6.0-8.9	1.0-2.0	.37	.37	4	4	86
	6-11	17	48	30-40	1.05-1.25	0.20-0.60	0.21-0.23	6.0-8.9	0.5-2.0	.37	.37			
	11-16	17	48	30-40	1.25-1.45	0.20-0.60	0.18-0.20	6.0-8.9	0.0-0.5	.43	.43			
	16-24	8	52	35-45	1.20-1.40	0.01-0.06	0.11-0.16	6.0-8.9	0.0-0.5	.37	.37			
	24-36	7	53	35-40	1.25-1.45	0.20-0.60	0.18-0.20	6.0-8.9	0.0-0.5	.43	.43			
	36-44	7	53	35-40	1.25-1.45	0.20-0.60	0.18-0.20	6.0-8.9	0.0-0.5	.43	.43			
	44-80			---	---	0.01-0.06	---	---	---	---	---			
4380: Laird-----	0-7	62	26	5-18	1.30-1.50	2.00-6.00	0.16-0.18	0.0-2.9	1.0-2.0	.20	.20	4	3	86
	7-10	62	26	5-18	1.50-1.70	2.00-6.00	0.16-0.18	0.0-2.9	0.0-1.0	.20	.20			
	10-16	62	26	5-18	1.50-1.70	2.00-6.00	0.15-0.17	0.0-2.9	0.0-1.0	.28	.28			
	16-28	62	26	5-18	1.50-1.70	2.00-6.00	0.15-0.17	0.0-2.9	0.0-0.5	.28	.28			
	28-36	62	26	5-18	1.45-1.65	2.00-6.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28			
	36-45	45	43	5-18	1.50-1.70	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.37	.37			
	45-55	55	17	20-35	1.45-1.65	0.60-2.00	0.18-0.20	3.0-5.9	0.0-0.5	.37	.37			
	55-80	45	43	5-18	1.35-1.55	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.37	.37			
4665: Lodgepole----	0-5	19	48	27-40	1.05-1.25	0.20-0.60	0.21-0.23	6.0-8.9	2.0-4.0	.37	.37	3	7	38
	5-9	7	48	40-50	1.20-1.40	0.01-0.06	0.13-0.17	6.0-8.9	1.0-3.0	.28	.28			
	9-24	7	48	40-50	1.20-1.40	0.01-0.06	0.11-0.16	6.0-8.9	1.0-3.0	.28	.28			
	24-38	7	48	40-50	1.20-1.40	0.01-0.06	0.10-0.13	6.0-8.9	1.0-2.0	.28	.28			
	38-45	8	55	35-40	1.25-1.45	0.20-0.60	0.18-0.20	6.0-8.9	1.0-2.0	.32	.32			
	45-54	19	48	27-40	1.25-1.45	0.20-0.60	0.18-0.20	6.0-8.9	0.0-0.5	.43	.43			
	54-80	27	54	12-27	1.40-1.65	0.60-2.00	0.18-0.20	0.0-2.9	0.0-0.5	.43	.43			
4667: Lodgepole----	0-5	19	48	27-40	1.05-1.25	0.20-0.60	0.21-0.23	6.0-8.9	2.0-4.0	.37	.37	3	7	38
	5-14	7	48	40-50	1.20-1.40	0.01-0.06	0.21-0.23	6.0-8.9	1.0-3.0	.32	.32			
	14-36	7	48	40-50	1.20-1.40	0.01-0.06	0.11-0.16	6.0-8.9	1.0-3.0	.32	.32			
	36-45	8	55	35-40	1.25-1.45	0.20-0.60	0.18-0.20	6.0-8.9	1.0-2.0	.32	.32			
	45-50	19	48	27-40	1.25-1.45	0.20-0.60	0.18-0.20	6.0-8.9	0.0-0.5	.43	.43			
	50-80	27	54	12-27	1.40-1.65	0.60-2.00	0.18-0.20	0.0-2.9	0.0-0.5	.43	.43			
5949: Otero-----	0-7	62	26	5-18	1.30-1.50	2.00-6.00	0.16-0.18	0.0-2.9	0.0-1.0	.24	.24	5	3	86
	7-55	62	26	5-18	1.50-1.70	2.00-6.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28			
	55-80	65	23	5-18	1.50-1.70	2.00-6.00	0.11-0.13	0.0-2.9	0.0-0.5	.28	.28			
5975: Overlake-----	0-6	95	2	1-7	1.40-1.60	6.00-20.00	0.07-0.09	0.0-2.9	0.0-1.0	.15	.15	5	1	250
	6-31	95	2	1-7	1.60-1.80	6.00-20.00	0.06-0.08	0.0-2.9	0.0-0.5	.15	.15			
	31-45	63	25	5-18	1.40-1.65	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.43	.43			
	45-80	67	20	5-18	1.50-1.70	2.00-6.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28			
6091: Pits-----	0-80	96	2	1-5	1.70-2.00	20.00-20.00	0.02-0.04	0.0-2.9	0.0-0.5	.15	.15	2	8	0
6570: Sanborn-----	0-5	43	40	7-18	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	0.0-1.0	.28	.28	5	4L	86
	5-10	43	40	7-18	1.45-1.65	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
	10-25	43	40	7-18	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.37	.37			
	25-40	63	25	5-18	1.40-1.65	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.43	.43			
	40-50	95	2	1-7	1.60-1.80	6.00-20.00	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
	50-80	95	2	1-7	1.60-1.80	6.00-20.00	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
6632: Sarben-----	0-6	82	9	3-15	1.35-1.55	6.00-20.00	0.10-0.12	0.0-2.9	0.0-1.0	.17	.17	5	2	134
	6-16	62	26	5-18	1.50-1.70	2.00-6.00	0.10-0.12	0.0-2.9	0.0-0.5	.28	.28			
	16-30	62	26	5-18	1.50-1.70	2.00-6.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28			
	30-48	62	26	5-18	1.50-1.70	2.00-6.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28			
	48-80	62	26	5-18	1.50-1.70	2.00-6.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28			
6633: Sarben-----	0-6	82	9	3-15	1.35-1.55	6.00-20.00	0.10-0.12	0.0-2.9	0.0-1.0	.17	.17	5	2	134
	6-16	62	26	5-18	1.55-1.75	2.00-6.00	0.10-0.12	0.0-2.9	0.0-0.5	.28	.28			
	16-38	62	26	5-18	1.50-1.70	2.00-6.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28			
	38-63	62	26	5-18	1.60-1.80	2.00-6.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28			
	63-80	82	9	3-15	1.60-1.80	6.00-20.00	0.05-0.07	0.0-2.9	0.0-0.5	.17	.17			
6634: Sarben-----	0-6	82	9	3-15	1.35-1.55	6.00-20.00	0.10-0.12	0.0-2.9	0.0-1.0	.17	.17	5	2	134
	6-16	62	26	5-18	1.50-1.70	2.00-6.00	0.15-0.17	0.0-2.9	0.0-0.5	.28	.28			
	16-34	62	26	5-18	1.50-1.70	2.00-6.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28			
	34-53	62	26	5-18	1.50-1.70	2.00-6.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28			
	53-80	62	26	5-18	1.55-1.75	2.00-6.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28			
6635: Sarben-----	0-6	82	9	3-15	1.35-1.55	6.00-20.00	0.10-0.12	0.0-2.9	0.0-1.0	.17	.17	5	2	134
	6-11	82	9	3-15	1.50-1.70	6.00-20.00	0.10-0.12	0.0-2.9	0.0-0.5	.17	.17			
	11-17	62	26	5-18	1.50-1.70	2.00-6.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28			
	17-38	62	26	5-18	1.50-1.70	2.00-6.00	0.12-0.16	0.0-2.9	0.0-0.5	.28	.28			
	38-48	95	1	1-7	1.55-1.75	6.00-20.00	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
	48-80	95	1	1-7	1.55-1.75	6.00-20.00	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
6700: Satanta-----	0-6	62	26	5-18	1.30-1.50	2.00-6.00	0.16-0.18	0.0-2.9	1.0-3.0	.20	.20	5	3	86
	6-16	40	38	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	1.0-3.0	.28	.28			
	16-24	40	38	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.37	.37			
	24-29	40	38	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-1.0	.37	.37			
	29-46	40	38	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-1.0	.37	.37			
	46-80	63	25	5-18	1.40-1.65	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.43	.43			

PHYSICAL PROPERTIES OF THE SOILS
Dundy County, Nebraska: Update

(Single entries under "Sand and Silt" are a representative percentage are calculated using an algorithm. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer)

Map symbol and soil name	Depth In	Sand Pct	Silt Pct	Clay Pct	Moist bulk density g/cc	Permea- bility (Ksat) in/hr	Available water capacity In/in	Linear extensi- bility Pct	Organic matter Pct	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										K	Kf	T		
6820: Scoville-----	0-7	82	9	3-15	1.35-1.55	6.00-20.00	0.10-0.12	0.0-2.9	0.0-1.0	.17	.17	5	2	134
	7-39	95	2	1-7	1.60-1.80	6.00-20.00	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
	39-44	82	9	3-15	1.55-1.75	6.00-20.00	0.08-0.10	0.0-2.9	0.0-0.5	.17	.17			
	44-57	63	25	5-18	1.40-1.65	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.43	.43			
	57-70	63	25	5-18	1.40-1.65	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.43	.43			
	70-80	63	25	5-18	1.40-1.65	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.43	.43			
7090: Sulco-----	0-6	62	26	5-18	1.30-1.50	2.00-6.00	0.16-0.18	0.0-2.9	0.0-1.0	.24	.24	5	4L	86
	6-9	44	44	5-18	1.45-1.65	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
	9-24	44	44	5-18	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.37	.37			
	24-80	61	28	5-18	1.40-1.65	0.60-2.00	0.16-0.18	0.0-2.9	0.0-0.5	.37	.37			
7096: Sulco-----	0-6	44	44	7-18	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	0.0-1.0	.37	.37	5	4L	86
	6-17	44	44	7-18	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.37	.37			
	17-80	44	44	7-18	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.37	.37			
7098: Sulco-----	0-4	44	44	7-18	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	0.0-1.0	.37	.37	5	4L	86
	4-13	44	44	7-18	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.37	.37			
	13-80	44	44	7-18	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.37	.37			
7100: Sulco-----	0-3	44	44	7-18	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	0.0-1.0	.37	.37	5	4L	86
	3-6	44	44	7-18	1.45-1.65	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
	6-16	44	44	7-18	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.37	.37			
	16-27	44	44	7-18	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.37	.37			
	27-80	44	44	7-18	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.37	.37			
7102: Sulco, eroded	0-5	44	44	7-18	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	0.0-1.0	.37	.37	5	4L	86
	5-20	44	44	7-18	1.45-1.65	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
	20-80	44	44	7-18	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.37	.37			
Sulco-----	0-3	44	44	7-18	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	0.0-1.0	.37	.37	5	4L	86
	3-6	44	44	7-18	1.45-1.65	0.60-2.00	0.16-0.20	0.0-2.9	0.0-0.5	.37	.37			
	6-16	44	44	7-18	1.45-1.65	0.60-2.00	0.16-0.20	0.0-2.9	0.0-0.5	.37	.37			
	16-27	44	44	7-18	1.45-1.65	0.60-2.00	0.16-0.20	0.0-2.9	0.0-0.5	.37	.37			
	27-80	44	44	7-18	1.45-1.65	0.60-2.00	0.16-0.20	0.0-2.9	0.0-0.5	.37	.37			
7152: Tassel-----	0-4	66	23	5-12	1.30-1.50	2.00-6.00	0.13-0.15	0.0-2.9	0.0-1.0	.24	.24	2	3	86
	4-9	66	23	5-12	1.50-1.70	2.00-6.00	0.13-0.15	0.0-2.9	0.0-0.5	.28	.28			
	9-80				---	0.06-0.20	---		---	---	---			
Ashollow-----	0-6	62	26	5-18	1.30-1.50	2.00-6.00	0.13-0.15	0.0-2.9	0.0-1.0	.24	.24	5	3	86
	6-11	62	26	5-18	1.50-1.70	2.00-6.00	0.13-0.15	0.0-2.9	0.0-1.0	.28	.28			
	11-36	62	26	5-18	1.50-1.70	2.00-6.00	0.12-0.14	0.0-2.9	0.0-0.5	.28	.28			
	36-80	62	26	5-18	1.50-1.70	2.00-6.00	0.11-0.13	0.0-2.9	0.0-0.5	.28	.28			
Rock Outcrop-	0-80			0-0	---	0.06-0.20	0.00-0.00	---	---	---	---	-	8	0
7461: Ulysses-----	0-5	41	42	15-20	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	5-9	33	44	18-27	1.45-1.65	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28			
	9-15	33	44	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	1.0-2.0	.37	.37			
	15-23	33	44	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-1.0	.37	.37			
	23-48	43	43	10-18	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.37	.37			
	48-80	60	26	10-18	1.40-1.65	0.60-2.00	0.17-0.18	0.0-2.9	0.0-0.5	.43	.43			
7462: Ulysses-----	0-5	41	42	15-20	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28	5	5	56
	5-12	33	44	18-27	1.45-1.65	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.28	.28			
	12-24	33	44	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.5-2.0	.37	.37			
	24-44	33	44	18-27	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-1.0	.37	.37			
	44-60	43	43	10-18	1.45-1.65	0.60-2.00	0.17-0.19	0.0-2.9	0.0-0.5	.37	.37			
7602: Valent-----	0-5	82	9	3-15	1.35-1.55	6.00-20.00	0.10-0.12	0.0-2.9	0.0-1.0	.17	.17	5	2	134
	5-9	95	2	1-7	1.60-1.80	6.00-20.00	0.07-0.09	0.0-2.9	0.0-0.5	.15	.15			
	9-80	95	2	1-7	1.60-1.80	6.00-20.00	0.05-0.17	0.0-2.9	0.0-0.5	.15	.15			
7610: Valent-----	0-7	95	2	1-7	1.40-1.60	6.00-20.00	0.07-0.09	0.0-2.9	0.0-1.0	.15	.15	5	2	250
	7-10	95	2	1-7	1.60-1.80	6.00-20.00	0.07-0.09	0.0-2.9	0.0-0.5	.15	.15			
	10-60	95	2	1-7	1.60-1.80	6.00-20.00	0.05-0.17	0.0-2.9	0.0-0.5	.15	.15			
7612: Valent-----	0-4	95	2	1-7	1.40-1.60	6.00-20.00	0.07-0.09	0.0-2.9	0.0-1.0	.15	.15	5	2	250
	4-9	95	2	1-7	1.60-1.80	6.00-20.00	0.07-0.09	0.0-2.9	0.0-0.5	.15	.15			
	9-80	95	2	1-7	1.60-1.80	6.00-20.00	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
7616: Valent-----	0-5	95	2	1-7	1.40-1.60	6.00-20.00	0.07-0.09	0.0-2.9	0.0-1.0	.15	.15	5	2	250
	5-9	95	2	1-7	1.60-1.80	6.00-20.00	0.07-0.09	0.0-2.9	0.0-0.5	.15	.15			
	9-80	95	2	1-7	1.60-1.80	6.00-20.00	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
7618: Valent-----	0-3	95	2	1-7	1.40-1.60	6.00-20.00	0.07-0.09	0.0-2.9	0.0-1.0	.15	.15	5	2	250
	3-60	95	2	1-7	1.60-1.80	6.00-20.00	0.05-0.08	0.0-2.9	0.0-0.5	.15	.15			
Valent-----	0-3	95	2	1-7	1.40-1.60	6.00-20.00	0.07-0.09	0.0-2.9	0.0-1.0	.15	.15	5	2	250
	3-60	95	2	1-7	1.60-1.80	6.00-20.00	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
9999a: Water-----	---			---	---	---	---	---	---	---	---	-	---	---

CHEMICAL PROPERTIES OF THE SOILS
Dundy County, Nebraska

The Chemical Properties table shows estimates of some characteristics and features that affect soil behavior. These estimates are given for the major layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils. Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. Soils having a high cation-exchange capacity can retain cations. The ability to retain cations helps to prevent the pollution of ground water.

Soil reaction is a measure of acidity or alkalinity and is expressed as a range in pH values. The range in pH of each major horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Calcium carbonate equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

Gypsum is expressed as a percent, by weight, of hydrated calcium sulfates in the fraction of the soil less than 20 millimeters in size. Gypsum is partially soluble in water and can be dissolved and removed by water. Soils that have a high content of gypsum may collapse if the gypsum is removed by percolating water.

Salinity is a measure of soluble salts in the soil at saturation. It is expressed as the electrical conductivity of the saturation extract, in millimhos per centimeter at 25 degrees C. Estimates are based on field and laboratory measurements at representative sites of nonirrigated soils. The salinity of irrigated soils is affected by the quality of the irrigation water and by the frequency of water application. Hence, the salinity of soils in individual fields can differ greatly from the value given in the table. Salinity affects the suitability of a soil for crop production, the stability of soil if used as construction material, and the potential of the soil to corrode metal and concrete.

Sodium adsorption ratio (SAR) is a measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration. Soils that have SAR values of 13 or more may be characterized by an increased dispersion of organic matter and clay particles, reduced permeability and aeration, and a general degradation of soil structure.

CHEMICAL PROPERTIES OF THE SOILS--Continued
Dundy County, Nebraska

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Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
1331: Bankard-----	0-5	0.0-10	7.9-8.4	1-5	0	0	0
	5-60	0.0-5.0	7.9-8.4	5-10	0	0	0
1465: Benkelman-----	0-4	0.0-15	7.9-8.4	1-5	0	0.0-2.0	0
	4-11	0.0-5.0	7.9-8.4	1-5	0	0.0-2.0	0
	11-22	0.0-5.0	8.5-9.0	1-5	0	0.0-2.0	0
	22-34	0.0-5.0	8.5-9.0	1-5	0	0.0-2.0	0
	34-46	0.0-5.0	8.5-9.0	1-5	0	0.0-2.0	0
	46-80	0.0-5.0	8.5-9.0	1-5	0	0.0-2.0	0
1500: Blackwood-----	0-6	10-40	6.6-7.3	0	0	0	0
	6-14	15-55	6.6-7.3	0	0	0	0
	14-23	15-40	7.9-8.4	0	0	0	0
	23-28	15-40	7.9-8.4	0	0	0	0
	28-34	0.0-20	7.9-8.4	1-5	0	0	0
	34-43	0.0-10	7.9-8.4	1-10	0	0	0
	43-80	0.0-10	7.9-8.4	1-10	0	0	0
1502: Blackwood-----	0-8	10-40	6.6-7.3	0	0	0	0
	8-18	15-55	6.6-7.3	0	0	0	0
	18-32	15-40	7.9-8.4	0	0	0	0
	32-48	15-40	7.9-8.4	0-5	0	0	0
	48-80	0.0-20	7.9-8.4	1-10	0	0	0
1524: Blanche-----	0-7	0.0-20	7.4-7.8	0	0	0	0
	7-19	0.0-15	7.4-7.8	1-10	0	0	0
	19-22	0.0-5.0	7.9-8.4	1-10	0	0	0
	22-80	---	---	---	---	---	---
1526: Blanche-----	0-7	0.0-20	7.4-7.8	0	0	0	0
	7-10	0.0-20	7.4-7.8	0	0	0	0
	10-22	0.0-15	7.4-7.8	1-10	0	0	0
	22-28	0.0-5.0	7.9-8.4	1-10	0	0	0
	28-80	---	---	---	---	---	---
1700: Bolent-----	0-6	0.0-10	7.4-7.9	5-10	0	0	0
	6-30	0.0-5.0	7.9-8.4	10-15	0	0	0
	30-80	0.0-5.0	7.9-8.4	10-15	0	0	0
Almeria-----	0-2	0.0-20	7.4-7.8	0-5	0	0.0-4.0	0
	2-8	0.0-5.0	6.6-7.3	0-5	0	0.0-4.0	0
	8-36	0.0-5.0	6.6-7.3	0-5	0	0.0-4.0	0
	36-80	0.0-5.0	6.6-7.3	0-5	0	0.0-4.0	0
1940: Calamus-----	0-5	0.0-5.0	7.4-7.8	0	0	0	0
	5-11	0.0-5.0	7.4-7.8	0	0	0	0
	11-30	0.0-5.0	7.4-7.8	0	0	0	0
	30-52	0.0-5.0	7.4-7.8	0	0	0	0
	52-80	0.0-5.0	7.4-7.8	0	0	0	0
2140: Colfer-----	0-7	0.0-5.0	7.4-7.8	0	0	0	0
	7-24	0.0-5.0	6.6-7.3	0	0	0	0
	24-43	0.0-5.0	6.6-7.3	0	0	0	0
	43-50	0.0-5.0	6.6-7.3	0	0	0	0
	50-54	0.0-5.0	7.9-8.4	10-30	0	0.0-4.0	0
	54-80	0.0-5.0	7.9-8.4	10-15	0	0.0-2.0	0
2250: Craft-----	0-6	0.0-15	7.9-8.4	5-10	0	0.0-2.0	0
	6-38	0.0-5.0	7.9-8.4	10-15	0	0.0-4.0	0
	38-80	0.0-5.0	7.9-8.4	10-15	0-1	0.0-4.0	0
2254: Craft-----	0-3	0.0-15	7.9-8.4	5-10	0	0.0-2.0	0
	3-27	0.0-5.0	7.9-8.4	10-15	0	0.0-4.0	0
	27-80	0.0-5.0	7.9-8.4	10-15	0-1	0.0-4.0	0
2394: Dailey-----	0-7	0.0-20	6.6-7.3	0	0	0	0
	7-15	0.0-10	6.6-7.3	0	0	0	0
	15-80	0.0-5.0	6.6-7.3	0	0	0	0

CHEMICAL PROPERTIES OF THE SOILS--Continued
Dundy County, Nebraska

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Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
2630: Duroc-----	0-7	10-40	6.6-7.3	0	0	0	0
	7-25	15-55	6.6-7.3	0	0	0	0
	25-33	0.0-20	7.4-7.8	0	0	0	0
	33-80	0.0-10	7.9-8.4	10-15	0	0	0
3280: Haigler-----	0-5	0.0-15	7.9-8.4	5-10	0	0.0-4.0	0-5
	5-10	0.0-5.0	8.5-9.0	5-10	0	0.0-4.0	5-9
	10-16	0.0-5.0	9.1-11.0	5-10	0	4.0-8.0	45-90
	16-27	0.0-5.0	9.1-11.0	5-10	0	4.0-8.0	55-125
	27-43	0.0-5.0	8.5-9.0	5-10	0	4.0-8.0	15-45
	43-80	0.0-5.0	8.5-9.0	5-10	0	1.0-4.0	5-30
4042: Jayem-----	0-5	0.0-20	6.6-7.3	0	0	0	0
	5-14	0.0-25	6.6-7.3	0	0	0	0
	14-29	0.0-5.0	6.6-7.3	0	0	0	0
	29-80	0.0-5.0	7.4-7.8	0	0	0	0
4140: Kanorado-----	0-6	0.0-30	7.4-7.8	0-2	0	0.0-4.0	0-6
	6-11	0.0-30	7.4-7.8	0-2	0	0.0-4.0	0-6
	11-16	0.0-15	7.9-8.4	10-15	0-5	0.0-4.0	0-6
	16-24	0.0-20	7.9-8.4	10-15	0-5	0.0-4.0	0-6
	24-36	0.0-15	7.9-8.4	15-40	0-5	0.0-4.0	0-6
	36-44	0.0-15	7.9-8.4	10-15	5-10	4.0-8.0	3-6
	44-80	---	---	---	---	---	---
4380: Laird-----	0-7	5.0-25	7.4-7.8	5-10	0	0.0-4.0	0-9
	7-10	0.0-15	7.9-8.4	10-15	0	0.0-4.0	0-9
	10-16	0.0-15	7.9-8.4	10-15	0	0.0-4.0	0-9
	16-28	0.0-5.0	7.9-8.4	15-40	0	0.0-4.0	6-15
	28-36	0.0-5.0	7.9-8.4	15-40	0	0.0-4.0	6-15
	36-45	0.0-5.0	7.9-8.4	15-40	0	0.0-4.0	6-15
	45-55	0.0-5.0	7.9-8.4	15-40	0	0.0-4.0	6-15
	55-80	0.0-5.0	7.9-8.4	10-15	0	0.0-4.0	6-15
4665: Lodgepole-----	0-5	40-110	6.1-6.5	0	0	0	0
	5-9	30-105	6.1-6.5	0	0	0	0
	9-24	30-105	6.1-6.5	0	0	0	0
	24-38	30-105	6.6-7.3	0	0	0	0
	38-45	25-85	6.6-7.3	0	0	0	0
	45-54	0.0-15	6.6-7.3	0	0	0	0
	54-80	0.0-10	7.4-7.8	0	0	0	0
4667: Lodgepole-----	0-5	40-110	6.1-6.5	0	0	0	0
	5-14	30-105	6.1-6.5	0	0	0	0
	14-36	30-105	6.1-6.5	0	0	0	0
	36-45	25-85	6.6-7.3	0	0	0	0
	45-50	0.0-15	6.6-7.3	0	0	0	0
	50-80	0.0-10	7.4-7.8	0	0	0	0
5949: Otero-----	0-7	0.0-10	7.4-7.8	1-5	0	0	0
	7-55	0.0-5.0	7.9-8.4	5-10	0	0	0
	55-80	0.0-5.0	7.9-8.4	5-10	0	0	0
5975: Overlake-----	0-6	0.0-5.0	6.6-7.3	0	0	0	0
	6-31	0.0-5.0	7.9-8.4	0	0	0	0
	31-45	0.0-5.0	8.5-9.0	5-10	0	0.0-4.0	0-6
	45-80	0.0-5.0	8.5-9.0	5-10	0	0.0-4.0	0-6
6091: Pits-----	0-80	0.0-5.0	6.6-7.8	0	0	0	0
6570: Sanborn-----	0-5	0.0-15	7.9-8.4	5-10	0	0.0-8.0	5-20
	5-10	0.0-5.0	9.1-11.0	5-10	0	0.0-8.0	15-60
	10-25	0.0-5.0	9.1-11.0	5-10	0	0.0-8.0	15-60
	25-40	0.0-5.0	9.1-11.0	5-10	0	0.0-8.0	15-60
	40-50	0.0-5.0	7.9-8.4	1-5	0	0.0-4.0	0-5
	50-80	0.0-5.0	7.9-8.4	1-5	0	0.0-4.0	0-5

CHEMICAL PROPERTIES OF THE SOILS--Continued
Dundy County, Nebraska

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Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
6632: Sarben-----	0-6	0.0-10	6.6-7.3	0	0	0	0
	6-16	0.0-5.0	6.6-7.3	0	0	0	0
	16-30	0.0-5.0	6.6-7.3	0	0	0	0
	30-48	0.0-5.0	7.9-8.4	5-10	0	0	0
	48-80	0.0-5.0	7.9-8.4	5-10	0	0	0
6633: Sarben-----	0-6	0.0-10	6.6-7.3	0	0	0	0
	6-16	0.0-5.0	6.6-7.3	0	0	0	0
	16-38	0.0-5.0	6.6-7.3	0	0	0	0
	38-63	0.0-5.0	7.9-8.4	5-10	0	0	0
	63-80	0.0-5.0	7.9-8.4	5-10	0	0	0
6634: Sarben-----	0-6	0.0-10	6.6-7.3	0	0	0	0
	6-16	0.0-5.0	6.6-7.3	0	0	0	0
	16-34	0.0-5.0	6.6-7.3	0	0	0	0
	34-53	0.0-5.0	7.9-8.4	5-10	0	0	0
	53-80	0.0-5.0	7.9-8.4	5-10	0	0	0
6635: Sarben-----	0-6	0.0-10	6.6-7.3	0	0	0	0
	6-11	0.0-5.0	6.6-7.3	0	0	0	0
	11-17	0.0-5.0	6.6-7.3	0	0	0	0
	17-38	0.0-5.0	7.9-8.4	5-10	0	0	0
	38-48	0.0-5.0	7.9-8.4	5-10	0	0	0
	48-80	0.0-5.0	7.9-8.4	5-10	0	0	0
6700: Satanta-----	0-6	10-40	6.6-7.3	0	0	0	0
	6-16	15-55	6.6-7.3	0	0	0	0
	16-24	15-40	6.6-7.3	0	0	0	0
	24-29	15-40	7.4-7.8	0	0	0	0
	29-46	0.0-20	7.9-8.4	10-15	0	0	0
	46-80	0.0-5.0	7.9-8.4	5-10	0	0	0
6820: Scoville-----	0-7	0.0-10	7.4-7.8	1-5	0	0	0
	7-39	0.0-5.0	7.4-7.8	1-5	0	0	0
	39-44	0.0-5.0	7.4-7.8	5-10	0	0	0
	44-57	0.0-5.0	7.9-8.4	5-10	0	0	0
	57-70	0.0-5.0	7.9-8.4	5-10	0	0	0
	70-80	0.0-5.0	7.9-8.4	10-15	0	0	0
7090: Sulco-----	0-6	0.0-15	7.4-7.8	0-1	0	0	0
	6-9	0.0-5.0	7.9-8.4	5-15	0	0	0
	9-24	0.0-5.0	7.9-8.4	5-15	0	0	0
	24-80	0.0-5.0	8.5-9.0	1-10	0	0	0
7096: Sulco-----	0-6	0.0-20	7.4-7.8	0-1	0	0	0
	6-17	0.0-5.0	8.5-9.0	5-15	0	0	0
	17-80	0.0-5.0	8.5-9.0	1-10	0	0	0
7098: Sulco-----	0-4	0.0-20	7.4-7.8	0-1	0	0	0
	4-13	0.0-5.0	8.5-9.0	5-15	0	0	0
	13-80	0.0-5.0	8.5-9.0	1-10	0	0	0
7100: Sulco-----	0-3	0.0-20	7.4-7.8	0-1	0	0	0
	3-6	0.0-5.0	7.9-8.4	5-15	0	0	0
	6-16	0.0-5.0	7.9-8.4	5-15	0	0	0
	16-27	0.0-5.0	8.5-9.0	5-15	0	0	0
	27-80	0.0-5.0	8.5-9.0	1-10	0	0	0
7102: Sulco, eroded---	0-5	0.0-20	7.4-7.8	0-1	0	0	0
	5-20	0.0-5.0	7.9-8.4	5-15	0	0	0
	20-80	0.0-5.0	8.5-9.0	1-10	0	0	0
Sulco-----	0-3	0.0-20	7.4-7.8	0-1	0	0	0
	3-6	0.0-5.0	7.9-8.4	5-15	0	0	0
	6-16	0.0-5.0	7.9-8.4	5-15	0	0	0
	16-27	0.0-5.0	8.5-9.0	5-15	0	0	0
	27-80	0.0-5.0	8.5-9.0	1-10	0	0	0

CHEMICAL PROPERTIES OF THE SOILS--Continued
Dundy County, Nebraska

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Map symbol and soil name	Depth	Cation- exchange capacity	Soil reaction	Calcium carbonate	Gypsum	Salinity	Sodium adsorption ratio
	In	meq/100g	pH	Pct	Pct	mmhos/cm	
7152:							
Tassel-----	0-4	0.0-10	7.4-7.8	0	0	0	0
	4-9	0.0-5.0	7.9-8.4	10-15	0	0	0
	9-80	---	---	---	---	---	---
Ashollow-----	0-6	0.0-15	7.9-8.4	10-15	0	0	0
	6-11	0.0-15	7.9-8.4	10-15	0	0	0
	11-36	0.0-5.0	7.9-8.4	10-15	0	0	0
	36-80	0.0-5.0	7.9-8.4	10-15	0	0	0
Rock Outcrop---	0-80	---	---	---	---	---	---
7461:							
Ulysses-----	0-5	10-40	6.6-7.3	0	0	0	0
	5-9	15-55	6.6-7.3	0	0	0	0
	9-15	15-40	7.4-7.8	0-5	0	0	0
	15-23	0.0-20	7.9-8.4	10-15	0	0	0
	23-48	0.0-10	7.9-8.4	5-10	0	0	0
	48-80	0.0-10	7.9-8.4	5-10	0	0	0
7462:							
Ulysses-----	0-5	10-40	6.6-7.3	0	0	0	0
	5-12	15-55	6.6-7.3	0	0	0	0
	12-24	15-40	7.4-7.8	0-5	0	0	0
	24-44	0.0-20	7.9-8.4	10-15	0	0	0
	44-60	0.0-10	7.9-8.4	5-10	0	0	0
7602:							
Valent-----	0-5	0.0-10	6.6-7.3	0	0	0	0
	5-9	0.0-5.0	6.6-7.3	0	0	0	0
	9-80	0.0-5.0	6.6-7.3	0	0	0	0
7610:							
Valent-----	0-7	0.0-5.0	6.6-7.2	0	0	0	0
	7-10	0.0-5.0	6.6-7.2	0	0	0	0
	10-60	0.0-5.0	6.6-7.2	0	0	0	0
7612:							
Valent-----	0-4	0.0-5.0	6.6-7.3	0	0	0	0
	4-9	0.0-5.0	6.6-7.3	0	0	0	0
	9-80	0.0-5.0	6.6-7.3	0	0	0	0
7616:							
Valent-----	0-5	0.0-5.0	6.6-7.3	0	0	0	0
	5-9	0.0-5.0	6.6-7.3	0	0	0	0
	9-80	0.0-5.0	6.6-7.3	0	0	0	0
7618:							
Valent-----	0-3	0.0-5.0	6.6-7.3	0	0	0	0
	3-60	0.0-5.0	6.6-7.3	0	0	0	0
Valent-----	0-3	0.0-5.0	6.6-7.3	0	0	0	0
	3-60	0.0-5.0	6.6-7.3	0	0	0	0
9999a:							
Water-----	---	---	---	---	---	---	---

WATER FEATURES Dundy County, Nebraska

The Water Features table gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations. Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

The months in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. The Water Features table indicates, by month, depth to the top (upper limit) and base (lower limit) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table. Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The Water Features table indicates surface water depth and the duration and frequency of ponding. Duration is expressed as very brief if less than 2 days, brief if 2 to 7 days, long if 7 to 30 days, and very long if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. None means that ponding is not probable; rare that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); occasional that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and frequent that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding, the temporary inundation of an area, is caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and frequency are estimated. Duration is expressed as extremely brief if 0.1 hour to 4 hours, very brief if 4 hours to 2 days, brief if 2 to 7 days, long if 7 to 30 days, and very long if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. None means that flooding is not probable; very rare that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); rare that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); occasional that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); frequent that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and very frequent that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
1331: Bankard-----	A	January	---	---	---	---	None	Very brief	Occasional
		February	---	---	---	---	None	Very brief	Occasional
		March	---	---	---	---	None	Very brief	Occasional
		April	---	---	---	---	None	Very brief	Occasional
		May	---	---	---	---	None	Very brief	Occasional
		June	---	---	---	---	None	Very brief	Occasional
		July	---	---	---	---	None	Very brief	Occasional
		August	---	---	---	---	None	Very brief	Occasional
		September	---	---	---	---	None	Very brief	Occasional
		October	---	---	---	---	None	Very brief	Occasional
		November	---	---	---	---	None	Very brief	Occasional
		December	---	---	---	---	None	Very brief	Occasional
1465: Benkelman-----	B	January	---	---	---	---	---	---	---
		February	---	---	---	---	---	---	---
		March	---	---	---	---	---	---	---
		April	---	---	---	---	---	---	---
		May	---	---	---	---	---	---	---
		June	---	---	---	---	---	---	---
		July	---	---	---	---	---	---	---
		August	---	---	---	---	---	---	---
		September	---	---	---	---	---	---	---
		October	---	---	---	---	---	---	---
		November	---	---	---	---	---	---	---
		December	---	---	---	---	---	---	---
1500: Blackwood-----	B	January	---	---	---	---	---	---	---
		February	---	---	---	---	---	---	---
		March	---	---	---	---	---	---	---
		April	---	---	---	---	---	---	---
		May	---	---	---	---	---	---	---
		June	---	---	---	---	---	---	---
		July	---	---	---	---	---	---	---
		August	---	---	---	---	---	---	---
		September	---	---	---	---	---	---	---
		October	---	---	---	---	---	---	---
		November	---	---	---	---	---	---	---
		December	---	---	---	---	---	---	---
1524: Blanche-----	B	January	---	---	---	---	---	---	---
		February	---	---	---	---	---	---	---
		March	---	---	---	---	---	---	---
		April	---	---	---	---	---	---	---
		May	---	---	---	---	---	---	---
		June	---	---	---	---	---	---	---
		July	---	---	---	---	---	---	---
		August	---	---	---	---	---	---	---
		September	---	---	---	---	---	---	---
		October	---	---	---	---	---	---	---
		November	---	---	---	---	---	---	---
		December	---	---	---	---	---	---	---
1526: Blanche-----	B	January	---	---	---	---	---	---	---
		February	---	---	---	---	---	---	---
		March	---	---	---	---	---	---	---
		April	---	---	---	---	---	---	---
		May	---	---	---	---	---	---	---
		June	---	---	---	---	---	---	---
		July	---	---	---	---	---	---	---
		August	---	---	---	---	---	---	---
		September	---	---	---	---	---	---	---
		October	---	---	---	---	---	---	---
		November	---	---	---	---	---	---	---
		December	---	---	---	---	---	---	---
1700: Bolent-----	A	January	1.5-3.0	>6.0	---	---	None	Brief	Occasional
		February	1.5-3.0	>6.0	---	---	None	Brief	Occasional
		March	1.5-3.0	>6.0	---	---	None	Brief	Occasional
		April	1.5-3.0	>6.0	---	---	None	Brief	Occasional
		May	1.5-3.0	>6.0	---	---	None	Brief	Occasional
		June	1.5-3.0	>6.0	---	---	None	Brief	Occasional
		July	1.5-3.0	>6.0	---	---	None	Brief	Occasional
		August	1.5-3.0	>6.0	---	---	None	Brief	Occasional
		September	1.5-3.0	>6.0	---	---	None	Brief	Occasional
		October	1.5-3.0	>6.0	---	---	None	Brief	Occasional
		November	1.5-3.0	>6.0	---	---	None	Brief	Occasional
		December	1.5-3.0	>6.0	---	---	None	Brief	Occasional
Almeria-----	D	January	0.0-1.5	>6.0	---	---	None	Brief	Frequent
		February	0.0-1.5	>6.0	---	---	None	Brief	Frequent
		March	0.0-1.5	>6.0	---	---	None	Brief	Frequent
		April	0.0-1.5	>6.0	---	---	None	Brief	Frequent
		May	0.0-1.5	>6.0	---	---	None	Brief	Frequent
		June	0.0-1.5	>6.0	---	---	None	Brief	Frequent
		July	0.0-1.5	>6.0	---	---	None	Brief	Frequent
		August	0.0-1.5	>6.0	---	---	None	Brief	Frequent
		September	0.0-1.5	>6.0	---	---	None	Brief	Frequent
		October	0.0-1.5	>6.0	---	---	None	Brief	Frequent
		November	0.0-1.5	>6.0	---	---	None	Brief	Frequent
		December	0.0-1.5	>6.0	---	---	None	Brief	Frequent
1940: Calamus-----	A	January	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		February	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		March	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		April	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		May	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		June	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		July	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		August	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		September	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		October	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		November	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		December	3.0-6.0	>6.0	---	---	None	Very brief	Rare
2140: Colfer-----	A	January	---	---	---	---	---	---	---
		February	---	---	---	---	---	---	---
		March	---	---	---	---	---	---	---
		April	---	---	---	---	---	---	---
		May	---	---	---	---	---	---	---
		June	---	---	---	---	---	---	---
		July	---	---	---	---	---	---	---
		August	---	---	---	---	---	---	---
		September	---	---	---	---	---	---	---
		October	---	---	---	---	---	---	---
		November	---	---	---	---	---	---	---
		December	---	---	---	---	---	---	---
2250:			---	---	---	---	---	---	---

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
			Ft	Ft	Ft				
Craft-----	B	January	---	---	---	---	None	Very brief	Rare
		February	---	---	---	---	None	Very brief	Rare
		March	---	---	---	---	None	Very brief	Rare
		April	---	---	---	---	None	Very brief	Rare
		May	---	---	---	---	None	Very brief	Rare
		June	---	---	---	---	None	Very brief	Rare
		July	---	---	---	---	None	Very brief	Rare
		August	---	---	---	---	None	Very brief	Rare
		September	---	---	---	---	None	Very brief	Rare
		October	---	---	---	---	None	Very brief	Rare
		November	---	---	---	---	None	Very brief	Rare
		December	---	---	---	---	None	Very brief	Rare
2254: Craft-----	B	January	---	---	---	---	None	Very brief	Frequent
		February	---	---	---	---	None	Very brief	Frequent
		March	---	---	---	---	None	Very brief	Frequent
		April	---	---	---	---	None	Very brief	Frequent
		May	---	---	---	---	None	Very brief	Frequent
		June	---	---	---	---	None	Very brief	Frequent
		July	---	---	---	---	None	Very brief	Frequent
		August	---	---	---	---	None	Very brief	Frequent
		September	---	---	---	---	None	Very brief	Frequent
		October	---	---	---	---	None	Very brief	Frequent
		November	---	---	---	---	None	Very brief	Frequent
		December	---	---	---	---	None	Very brief	Frequent
2394: Dailey-----	A	January	---	---	---	---	---	---	---
		February	---	---	---	---	---	---	---
2630: Duroc-----	B	January	---	---	---	---	---	---	---
		February	---	---	---	---	---	---	---
3280: Haigler-----	C	January	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		February	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		March	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		April	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		May	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		June	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		July	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		August	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		September	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		October	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		November	3.0-6.0	>6.0	---	---	None	Very brief	Rare
		December	3.0-6.0	>6.0	---	---	None	Very brief	Rare
4042: Jayem-----	B	January	---	---	---	---	---	---	---
		February	---	---	---	---	---	---	---
4140: Kanorado-----	C	January	---	---	---	---	---	---	---
		February	---	---	---	---	---	---	---
4380: Laird-----	B	January	---	---	---	---	---	---	---
		February	---	---	---	---	---	---	---
4665: Lodgepole-----	D	January	0.0	0.4-2.0	0.0-0.5	Brief	Occasional	---	None
		February	0.0	0.4-2.0	0.0-0.5	Brief	Occasional	---	None
		March	0.0	0.4-2.0	0.0-0.5	Brief	Occasional	---	None
		April	0.0	0.4-2.0	0.0-0.5	Brief	Occasional	---	None
		May	0.0	0.4-2.0	0.0-0.5	Brief	Occasional	---	None
		June	0.0	0.4-2.0	0.0-0.5	Brief	Occasional	---	None
		July	0.0	0.4-2.0	0.0-0.5	Brief	Occasional	---	None
		August	0.0	0.4-2.0	0.0-0.5	Brief	Occasional	---	None
		September	0.0	0.4-2.0	0.0-0.5	Brief	Occasional	---	None
		October	0.0	0.4-2.0	0.0-0.5	Brief	Occasional	---	None
		November	0.0	0.4-2.0	0.0-0.5	Brief	Occasional	---	None
		December	0.0	0.4-2.0	0.0-0.5	Brief	Occasional	---	None
4667: Lodgepole-----	D	January	0.0	0.4-2.0	0.0-2.0	Long	Frequent	---	None
		February	0.0	0.4-2.0	0.0-2.0	Long	Frequent	---	None
		March	0.0	0.4-2.0	0.0-2.0	Long	Frequent	---	None
		April	0.0	0.4-2.0	0.0-2.0	Long	Frequent	---	None
		May	0.0	0.4-2.0	0.0-2.0	Long	Frequent	---	None
		June	0.0	0.4-2.0	0.0-2.0	Long	Frequent	---	None
		July	0.0	0.4-2.0	0.0-2.0	Long	Frequent	---	None
		August	0.0	0.4-2.0	0.0-2.0	Long	Frequent	---	None
		September	0.0	0.4-2.0	0.0-2.0	Long	Frequent	---	None
		October	0.0	0.4-2.0	0.0-2.0	Long	Frequent	---	None
		November	0.0	0.4-2.0	0.0-2.0	Long	Frequent	---	None
		December	0.0	0.4-2.0	0.0-2.0	Long	Frequent	---	None

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
5949: Otero-----	B		Ft	Ft	Ft				
5975: Overlake-----	A		---	---	---	---	---	---	---
6091: Pits-----	A		---	---	---	---	---	---	---
6570: Sanborn-----	C		---	---	---	---	---	---	---
		January	1.5-3.0	>6.0	---	---	None	Very brief	Rare
		February	1.5-3.0	>6.0	---	---	None	Very brief	Rare
		March	1.5-3.0	>6.0	---	---	None	Very brief	Rare
		April	1.5-3.0	>6.0	---	---	None	Very brief	Rare
		May	1.5-3.0	>6.0	---	---	None	Very brief	Rare
		June	1.5-3.0	>6.0	---	---	None	Very brief	Rare
		July	1.5-3.0	>6.0	---	---	None	Very brief	Rare
		August	1.5-3.0	>6.0	---	---	None	Very brief	Rare
		September	1.5-3.0	>6.0	---	---	None	Very brief	None
		October	1.5-3.0	>6.0	---	---	None	Very brief	None
		November	1.5-3.0	>6.0	---	---	None	Very brief	None
		December	1.5-3.0	>6.0	---	---	None	Very brief	None
6632: Sarben-----	B		---	---	---	---	---	---	---
6633: Sarben-----	B		---	---	---	---	---	---	---
6634: Sarben-----	B		---	---	---	---	---	---	---
6635: Sarben-----	B		---	---	---	---	---	---	---
6700: Satanta-----	B		---	---	---	---	---	---	---
6820: Scoville-----	A		---	---	---	---	---	---	---
7090: Sulco-----	B		---	---	---	---	---	---	---
7096: Sulco-----	B		---	---	---	---	---	---	---
7098: Sulco-----	B		---	---	---	---	---	---	---
7100: Sulco-----	B		---	---	---	---	---	---	---
7102: Sulco, eroded-----	B		---	---	---	---	---	---	---
Sulco-----	B		---	---	---	---	---	---	---
7152: Tassel-----	D		---	---	---	---	---	---	---
Ashollow-----	B		---	---	---	---	---	---	---
Rock Outcrop-----	D		---	---	---	---	---	---	---
7461: Ulysses-----	B		---	---	---	---	---	---	---
7462: Ulysses-----	B		---	---	---	---	---	---	---
7602: Valent-----	A		---	---	---	---	---	---	---
7610: Valent-----	A		---	---	---	---	---	---	---
7612: Valent-----	A		---	---	---	---	---	---	---
7616: Valent-----	A		---	---	---	---	---	---	---
7618:			---	---	---	---	---	---	---

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated.)

Map symbol and soil name	Hydro- logic group	Month	Soil Saturation		Ponding			Flooding	
			Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
Valent-----	A		Ft	Ft	Ft				
Valent-----	A		---	---	---	---	---	---	---
9999a:			---	---	---	---	---	---	---
Water-----	---		---	---	---	---	---	---	---

The following table gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A restrictive layer is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness and thickness of the restrictive layer, both of which significantly affect the ease of excavation. Depth to top is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as low, moderate, or high, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as low, moderate, or high. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Map symbol and soil name	Restrictive layer				Potential for Frost action	Risk of corrosion	
	Kind	Depth to top In	Thickness In	Hardness		Uncoated Steel	Concrete
1331:							
Bankard-----	---	---	---	---	Low	Low	Low
1465:							
Benkelman-----	---	---	---	---	Moderate	High	Low
1500:							
Blackwood-----	---	---	---	---	Moderate	Low	Low
1502:							
Blackwood-----	---	---	---	---	Moderate	Low	Low
1524:							
Blanche-----	20-40	Bedrock (paralithic)	---	---	Low	Low	Low
1526:							
Blanche-----	20-40	Bedrock (paralithic)	---	---	Low	Low	Low
1700:							
Bolent-----	---	---	---	---	Moderate	Low	Low
Almeria-----	---	---	---	---	Moderate	High	Low
1940:							
Calamus-----	---	---	---	---	Low	Low	Low
2140:							
Colfer-----	---	---	---	---	Low	Low	Low
2250:							
Craft-----	---	---	---	---	Low	High	Low
2254:							
Craft-----	---	---	---	---	Low	High	Low
2394:							
Dailey-----	---	---	---	---	Low	High	Low
2630:							
Duroc-----	---	---	---	---	Low	Low	Low
3280:							
Haigler-----	---	---	---	---	Moderate	High	Low
4042:							
Jayem-----	---	---	---	---	Low	Moderate	Low
4140:							
Kanorado-----	40-60	Bedrock (paralithic)	---	---	Low	High	Low
4380:							
Laird-----	---	---	---	---	Moderate	High	Moderate
4665:							
Lodgepole-----	---	---	---	---	High	High	Low
4667:							
Lodgepole-----	---	---	---	---	High	High	Low
5949:							
Otero-----	---	---	---	---	Low	High	Low
5975:							
Overlake-----	---	---	---	---	Low	Low	Low
6091:							
Pits-----	---	---	---	---	Low	Low	Low
6570:							
Sanborn-----	---	---	---	---	Moderate	High	Moderate
6632:							
Sarben-----	---	---	---	---	Low	High	Low
6633:							
Sarben-----	---	---	---	---	Low	High	Low
6634:							
Sarben-----	---	---	---	---	Low	High	Low
6635:							
Sarben-----	---	---	---	---	Low	High	Low
6700:							
Satanta-----	---	---	---	---	Moderate	Low	Low
6820:							
Scoville-----	---	---	---	---	Low	High	Low
7090:							
Sulco-----	---	---	---	---	Low	High	Low
7096:							
Sulco-----	---	---	---	---	Low	High	Low
7098:							
Sulco-----	---	---	---	---	Low	High	Low
7100:							
Sulco-----	---	---	---	---	Low	High	Low
7102:							
Sulco, eroded---	---	---	---	---	Low	High	Low
Sulco-----	---	---	---	---	Low	High	Low
7152:							
Tassel-----	6-20	Bedrock (paralithic)	---	---	Low	Low	Low
Ashollow-----	---	---	---	---	Low	Low	Low
Rock Outcrop---	0-0	Bedrock (paralithic)	---	---	None	---	---
7461:							
Ulysses-----	---	---	---	---	Low	Moderate	Low
7462:							
Ulysses-----	---	---	---	---	Low	Moderate	Low
7602:							
Valent-----	---	---	---	---	Low	Moderate	Low
7610:							
Valent-----	---	---	---	---	Low	Moderate	Low

Map symbol and soil name	Restrictive layer				Potential for Frost action	Risk of corrosion	
	Kind	Depth to top	Thickness	Hardness		Uncoated Steel	Concrete
7612:		In	In				
Valent-----	---	---	---	---	Low	Moderate	Low
7616:							
Valent-----	---	---	---	---	Low	Moderate	Low
7618:							
Valent-----	---	---	---	---	Low	Moderate	Low
Valent-----	---	---	---	---	Low	Moderate	Low
9999a:							
Water-----	---	---	---	---	---	---	---

WATER MANAGEMENT
Dundy County, Nebraska

The soils of the survey area are rated in the Water Management table according to limitations that affect their suitability for water management. Soils are rated for pond reservoir areas, drainage, irrigation, terraces and diversions, and grassed waterways. Restrictive features that affect each soil for the specified use is also provided in the table.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Moderately limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Limited indicates that the soil has one or more features that are significant limitations for the specified use. The limitations can be overcome, but generally require special design, soil reclamation, or installation procedures that may result in additional expense. Fair performance and moderate to high maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Limitation class terms, such as very limited or limited, etc., limitation ratings, and numerical ratings are shown for each soil feature listed. As many as three soil features may be listed for each soil component if applicable. The overall limitation rating for the soil component is based on the most severe limitation.

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects traffic ability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Drainage is the removal of excess surface and subsurface water from the soil. How easily and effectively the soil is drained depends on the depth to bedrock, to a cemented pan, or to other layers that affect the rate of water movement; permeability; depth to a high water table or depth of standing water if the soil is subject to ponding; slope; susceptibility to flooding; subsidence of organic layers; and the potential for frost action. Excavating and grading and the stability of ditch banks are affected by depth to bedrock or to a cemented pan, large stones, slope, and the hazard of cutbanks caving. The productivity of the soil after drainage is adversely affected by extreme acidity or by toxic substances in the root zone, such as salts, sodium, and sulfur. Availability of drainage outlets is not considered in the ratings.

Irrigation is the controlled application of water to supplement rainfall and support plant growth. The design and management of an irrigation system are affected by depth to the water table, the need for drainage, flooding, available water capacity, intake rate, permeability, erosion hazard, and slope. The construction of a system is affected by large stones and depth to bedrock or to a cemented pan. The performance of a system is affected by the depth of the root zone, the amount of salts or sodium, and soil reaction.

Terraces and diversions are embankments or a combination of channels and ridges constructed across a slope to control erosion and conserve moisture by intercepting runoff. Slope, wetness, large stones, and depth to bedrock or to a cemented pan affect the construction of terraces and diversions. A restricted rooting depth, a very limited hazard of wind erosion or water erosion, an excessively coarse texture, and restricted permeability adversely affect maintenance.

Grassed waterways are natural or constructed channels, generally broad and shallow, which conduct surface water to outlets at a non-erosive velocity. Large stones, wetness, slope, and depth to bedrock or to a cemented pan affect the construction of grassed waterways. A hazard of wind erosion, low available water capacity, restricted rooting depth, toxic substances such as salts and sodium, and restricted permeability adversely affect the growth and maintenance of the grass after construction.

WATER MANAGEMENT--Continued
Dundy County, Nebraska

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
1331: Bankard-----	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: too sandy soil blowing	Limitation: rooting depth too arid droughty
1465: Benkelman-----	Limitation: deep to water	Limitation: erodes easily soil blowing	Limitation: erodes easily soil blowing	Limitation: erodes easily too arid
1500: Blackwood-----	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
1502: Blackwood-----	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
1524: Blanche-----	Limitation: deep to water	Limitation: fast intake soil blowing	Limitation: soil blowing depth to rock	Limitation: too arid depth to rock
1526: Blanche-----	Limitation: deep to water	Limitation: fast intake soil blowing	Limitation: soil blowing depth to rock	Limitation: too arid depth to rock
1700: Bolent-----	Limitation: flooding cutbanks cave	Limitation: fast intake wetness droughty	Limitation: too sandy wetness soil blowing	Limitation: rooting depth droughty
Almeria-----	Limitation: flooding cutbanks cave	Limitation: wetness droughty	Limitation: too sandy wetness	Limitation: rooting depth wetness droughty
1940: Calamus-----	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: too sandy soil blowing	Limitation: droughty
2140: Colfer-----	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: too sandy soil blowing	Limitation: rooting depth too arid droughty
2250: Craft-----	Limitation: deep to water	Favorable	Limitation: erodes easily soil blowing	Limitation: erodes easily too arid
2254: Craft-----	Limitation: deep to water	Favorable	Limitation: erodes easily soil blowing	Limitation: erodes easily too arid
2394: Dailey-----	Limitation: deep to water	Limitation: fast intake droughty	Limitation: too sandy soil blowing	Limitation: too arid droughty
2630: Duroc-----	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily
3280: Haigler-----	Limitation: deep to water	Limitation: excess salt soil blowing	Limitation: erodes easily soil blowing	Limitation: erodes easily
4042: Jayem-----	Limitation: deep to water	Limitation: fast intake soil blowing	Limitation: soil blowing	Limitation: too arid
4140: Kanorado-----	Limitation: deep to water	Limitation: erodes easily percs slowly slope	Limitation: erodes easily percs slowly	Limitation: erodes easily too arid
4380: Laird-----	Limitation: deep to water	Limitation: excess sodium soil blowing	Limitation: soil blowing	Limitation: excess sodium too arid
4665: Lodgepole-----	Limitation: frost action percs slowly ponding	Limitation: erodes easily percs slowly ponding	Limitation: erodes easily percs slowly ponding	Limitation: erodes easily percs slowly wetness
4667: Lodgepole-----	Limitation: frost action percs slowly ponding	Limitation: erodes easily percs slowly ponding	Limitation: erodes easily percs slowly ponding	Limitation: erodes easily percs slowly wetness

WATER MANAGEMENT--Continued
Dundy County, Nebraska

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
5949: Otero-----	Limitation: deep to water	Limitation: rooting depth soil blowing	Favorable	Limitation: too arid
5975: Overlake-----	Limitation: deep to water	Limitation: fast intake rooting depth soil blowing	Limitation: soil blowing	Limitation: rooting depth too arid
6091: Pits-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: slope too sandy	Limitation: rooting depth slope droughty
6570: Sanborn-----	Favorable	Limitation: wetness	Limitation: wetness	Favorable
6632: Sarben-----	Limitation: deep to water	Limitation: fast intake droughty	Limitation: soil blowing	Limitation: rooting depth droughty
6633: Sarben-----	Limitation: deep to water	Limitation: fast intake droughty	Limitation: soil blowing	Limitation: rooting depth droughty
6634: Sarben-----	Limitation: deep to water	Limitation: fast intake droughty	Limitation: soil blowing	Limitation: rooting depth droughty
6635: Sarben-----	Limitation: deep to water	Limitation: fast intake droughty	Limitation: soil blowing	Limitation: rooting depth droughty
6700: Satanta-----	Limitation: deep to water	Limitation: soil blowing	Limitation: soil blowing	Limitation: too arid
6820: Scoville-----	Limitation: deep to water	Limitation: fast intake soil blowing droughty	Limitation: too sandy soil blowing	Limitation: rooting depth too arid droughty
7090: Sulco-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: erodes easily soil blowing	Limitation: erodes easily too arid
7096: Sulco-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: erodes easily soil blowing	Limitation: erodes easily too arid
7098: Sulco-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: erodes easily soil blowing	Limitation: erodes easily too arid
7100: Sulco-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: erodes easily soil blowing	Limitation: erodes easily too arid
7102: Sulco, eroded---	Limitation: deep to water	Limitation: slope soil blowing	Limitation: erodes easily soil blowing	Limitation: erodes easily too arid
Sulco-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: erodes easily soil blowing	Limitation: erodes easily too arid
7152: Tassel-----	Limitation: deep to water	Limitation: slope soil blowing depth to rock	Limitation: slope depth to rock	Limitation: slope too arid
Ashollow-----	Limitation: deep to water	Limitation: slope soil blowing	Limitation: erodes easily slope soil blowing	Limitation: erodes easily slope too arid
Rock Outcrop---	Limitation: deep to water	Limitation: slope depth to rock	Limitation: slope depth to rock	Limitation: slope depth to rock
7461: Ulysses-----	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily too arid
7462: Ulysses-----	Limitation: deep to water	Favorable	Limitation: erodes easily	Limitation: erodes easily too arid

WATER MANAGEMENT--Continued
Dundy County, Nebraska

(The information in this report indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Map symbol and soil name	Features affecting--			
	Drainage	Irrigation	Terraces and diversions	Grassed waterways
7602: Valent-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: too arid droughty
7610: Valent-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: too arid droughty
7612: Valent-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: too arid droughty
7616: Valent-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: too arid droughty
7618: Valent-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: too arid droughty
Valent-----	Limitation: deep to water	Limitation: fast intake slope droughty	Limitation: too sandy soil blowing	Limitation: too arid droughty
9999a: Water-----	---	---	---	---

WATER MANAGEMENT--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1331: Bankard-----	95	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
1465: Benkelman-----	95	Somewhat limited Seepage	0.72	Very limited Piping Seepage	1.00 0.06	Very limited Deep to water	1.00
1500: Blackwood-----	98	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Deep to water	1.00
1502: Blackwood-----	98	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Deep to water	1.00
1524: Blanche-----	90	Very limited Seepage Depth to bedrock	1.00 0.37	Somewhat limited Thin layer Seepage	0.99 0.07	Very limited Deep to water	1.00
1526: Blanche-----	90	Very limited Seepage Depth to bedrock	1.00 0.17	Somewhat limited Thin layer Seepage	0.91 0.07	Very limited Deep to water	1.00
1700: Bolent-----	65	Very limited Seepage	1.00	Very limited Seepage Depth to saturated zone	1.00 0.95	Very limited Cutbanks cave Deep to water	1.00 0.02
Almeria-----	25	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Cutbanks cave	1.00
1940: Calamus-----	90	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Cutbanks cave Deep to water	1.00 0.96
2140: Colfer-----	90	Very limited Seepage	1.00	Somewhat limited Seepage	0.32	Very limited Deep to water	1.00
2250: Craft-----	95	Somewhat limited Seepage	0.72	Very limited Piping Seepage	1.00 0.06	Very limited Deep to water	1.00
2254: Craft-----	95	Somewhat limited Seepage	0.72	Very limited Piping Seepage	1.00 0.06	Very limited Deep to water	1.00
2394: Dailey-----	85	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
2630: Duroc-----	98	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Deep to water	1.00
3280: Haigler-----	90	Very limited Seepage	1.00	Very limited Seepage Piping	1.00 1.00	Very limited Cutbanks cave Deep to water Salty water	1.00 0.96 0.06
4042: Jayem-----	90	Very limited Seepage	1.00	Somewhat limited Seepage	0.07	Very limited Deep to water	1.00
4140: Kanorado-----	95	Somewhat limited Seepage Depth to bedrock	0.04 0.00	Somewhat limited Thin layer Piping	0.29 0.04	Very limited Deep to water	1.00

WATER MANAGEMENT--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
4380: Laird-----	90	Very limited Seepage	1.00	Very limited Piping Seepage	1.00 0.07	Very limited Deep to water	1.00
4665: Lodgepole-----	95	Somewhat limited Seepage	0.72	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Deep to water	1.00
4667: Lodgepole-----	95	Somewhat limited Seepage	0.72	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Deep to water	1.00
5949: Otero-----	90	Very limited Seepage	1.00	Somewhat limited Seepage	0.08	Very limited Deep to water	1.00
5975: Overlake-----	90	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
6091: Pits-----	100	Not rated		Not rated		Not rated	
6570: Sanborn-----	90	Very limited Seepage	1.00	Very limited Seepage Piping Depth to saturated zone	1.00 1.00 0.95	Very limited Cutbanks cave Deep to water	1.00 0.02
6632: Sarben-----	85	Very limited Seepage	1.00	Somewhat limited Seepage	0.07	Very limited Deep to water	1.00
6633: Sarben-----	85	Very limited Seepage	1.00	Somewhat limited Seepage	0.32	Very limited Deep to water	1.00
6634: Sarben-----	85	Very limited Seepage	1.00	Somewhat limited Seepage	0.07	Very limited Deep to water	1.00
6635: Sarben-----	85	Very limited Seepage Slope	1.00 0.12	Very limited Seepage	1.00	Very limited Deep to water	1.00
6700: Satanta-----	85	Somewhat limited Seepage	0.72	Very limited Piping Seepage	1.00 0.07	Very limited Deep to water	1.00
6820: Scoville-----	90	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
7090: Sulco-----	85	Somewhat limited Seepage	0.72	Very limited Piping Seepage	1.00 0.06	Very limited Deep to water	1.00
7096: Sulco-----	95	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Deep to water	1.00
7098: Sulco-----	95	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Deep to water	1.00
7100: Sulco-----	85	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Deep to water	1.00

WATER MANAGEMENT--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Pond Reservoir Area		Embankments, Dikes, and Levees		Excavated Ponds (Aquifer- fed)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
		Slope	0.12				
7102: Sulco, eroded-----	70	Somewhat limited Slope Seepage	0.97 0.72	Very limited Piping	1.00	Very limited Deep to water	1.00
Sulco-----	20	Somewhat limited Seepage Slope	0.72 0.12	Very limited Piping	1.00	Very limited Deep to water	1.00
7152: Tassel-----	50	Somewhat limited Slope Depth to bedrock	0.97 0.87	Very limited Thin layer Seepage	1.00 0.09	Very limited Deep to water	1.00
Ashollow-----	25	Very limited Seepage Slope	1.00 0.12	Somewhat limited Seepage	0.07	Very limited Deep to water	1.00
Rock Outcrop-----	25	Not rated		Not rated		Not rated	
7461: Ulysses-----	95	Somewhat limited Seepage	0.72	Very limited Piping Seepage	1.00 0.05	Very limited Deep to water	1.00
7462: Ulysses-----	90	Somewhat limited Seepage	0.72	Very limited Piping	1.00	Very limited Deep to water	1.00
7602: Valent-----	90	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
7610: Valent-----	90	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
7612: Valent-----	95	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Deep to water	1.00
7616: Valent-----	90	Very limited Seepage Slope	1.00 0.12	Very limited Seepage	1.00	Very limited Deep to water	1.00
7618: Valent-----	55	Very limited Seepage Slope	1.00 0.97	Very limited Seepage	1.00	Very limited Deep to water	1.00
Valent-----	35	Very limited Seepage Slope	1.00 0.12	Very limited Seepage	1.00	Very limited Deep to water	1.00
9999a: Water-----	100	Not rated		Not rated		Not rated	

SANITARY FACILITIES
Dundy County, Nebraska

Sanitary Facilities

The following tables show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A trench sanitary landfill is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

SANITARY FACILITIES
Dundy County, Nebraska

In an area sanitary landfill, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

SANITARY FACILITIES--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1331: Bankard-----	95	Very limited Flooding Filtering capacity	1.00 1.00	Very limited Flooding Seepage	1.00 1.00
1465: Benkelman-----	95	Somewhat limited Restricted permeability	0.46	Somewhat limited Seepage	0.53
1500: Blackwood-----	98	Somewhat limited Restricted permeability	0.46	Somewhat limited Seepage	0.53
1502: Blackwood-----	98	Somewhat limited Restricted permeability	0.46	Somewhat limited Seepage Slope	0.53 0.00
1524: Blanche-----	90	Very limited Depth to bedrock	1.00	Very limited Depth to soft bedrock Seepage Slope	1.00 1.00 0.00
1526: Blanche-----	90	Very limited Depth to bedrock	1.00	Very limited Depth to soft bedrock Seepage Slope	1.00 1.00 0.33
1700: Bolent-----	65	Very limited Flooding Depth to saturated zone Filtering capacity	1.00 1.00 1.00	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00
Almeria-----	25	Very limited Flooding Depth to saturated zone Filtering capacity	1.00 1.00 1.00	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00
1940: Calamus-----	90	Very limited Filtering capacity Depth to saturated zone Flooding	1.00 0.84 0.40	Very limited Seepage Flooding Depth to saturated zone	1.00 0.40 0.17
2140: Colfer-----	90	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
2250: Craft-----	95	Somewhat limited Restricted permeability Flooding	0.46 0.40	Somewhat limited Seepage Flooding	0.53 0.40
2254: Craft-----	95	Very limited Flooding Restricted permeability	1.00 0.46	Very limited Flooding Seepage	1.00 0.53
2394: Dailey-----	85	Very limited Filtering capacity	1.00	Very limited Seepage Slope	1.00 0.00
2630: Duroc-----	98	Somewhat limited Restricted permeability	0.46	Somewhat limited Seepage	0.53
3280: Haigler-----	90	Very limited Filtering capacity Depth to saturated zone	1.00 0.84	Very limited Seepage Flooding	1.00 0.40

SANITARY FACILITIES--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
4042: Jayem-----	90	Flooding	0.40	Depth to saturated zone	0.17
4140: Kanorado-----	95	Not limited		Very limited Seepage	1.00
		Very limited Restricted permeability	1.00	Very limited Slope	1.00
		Depth to bedrock	0.96	Depth to soft bedrock	0.88
		Slope	0.00		
4380: Laird-----	90	Somewhat limited Restricted permeability	0.46	Very limited Seepage	1.00
4665: Lodgepole-----	95	Very limited Restricted permeability	1.00	Very limited Ponding	1.00
		Ponding	1.00	Seepage	0.53
		Depth to saturated zone	1.00		
4667: Lodgepole-----	95	Very limited Restricted permeability	1.00	Very limited Ponding	1.00
		Ponding	1.00	Seepage	0.53
		Depth to saturated zone	1.00		
5949: Otero-----	90	Not limited		Very limited Seepage	1.00
5975: Overlake-----	90	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Restricted permeability	0.46		
6091: Pits-----	100	Not rated		Not rated	
6570: Sanborn-----	90	Very limited Depth to saturated zone	1.00	Very limited Seepage	1.00
		Filtering capacity	1.00	Depth to saturated zone	1.00
		Restricted permeability	0.46	Flooding	0.40
		Flooding	0.40		
6632: Sarben-----	85	Not limited		Very limited Seepage	1.00
				Slope	0.00
6633: Sarben-----	85	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
				Slope	0.33
6634: Sarben-----	85	Somewhat limited Slope	0.00	Very limited Seepage	1.00
				Slope	1.00
6635: Sarben-----	85	Very limited Filtering capacity	1.00	Very limited Slope	1.00
		Slope	1.00	Seepage	1.00
6700: Satanta-----	85	Somewhat limited Restricted permeability	0.46	Somewhat limited Seepage	0.53
6820: Scoville-----	90	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
		Restricted permeability	0.46	Slope	0.00

SANITARY FACILITIES--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
7090: Sulco-----	85	Somewhat limited Restricted permeability	0.46	Somewhat limited Seepage Slope	0.53 0.50
7096: Sulco-----	95	Somewhat limited Restricted permeability	0.46	Somewhat limited Seepage Slope	0.53 0.50
7098: Sulco-----	95	Somewhat limited Restricted permeability	0.46	Very limited Slope Seepage	1.00 0.53
7100: Sulco-----	85	Very limited Slope Restricted permeability	1.00 0.46	Very limited Slope Seepage	1.00 0.53
7102: Sulco, eroded-----	70	Very limited Slope Restricted permeability	1.00 0.46	Very limited Slope Seepage	1.00 0.53
Sulco-----	20	Very limited Slope Restricted permeability	1.00 0.46	Very limited Slope Seepage	1.00 0.53
7152: Tassel-----	50	Very limited Depth to bedrock Slope	1.00 1.00	Very limited Depth to soft bedrock Slope	1.00 1.00
Ashollow-----	25	Very limited Slope	1.00	Very limited Slope Seepage	1.00 1.00
Rock Outcrop-----	25	Not rated		Not rated	
7461: Ulysses-----	95	Somewhat limited Restricted permeability	0.46	Somewhat limited Seepage Slope	0.53 0.00
7462: Ulysses-----	90	Somewhat limited Restricted permeability	0.46	Somewhat limited Seepage Slope	0.53 0.50
7602: Valent-----	90	Very limited Filtering capacity	1.00	Very limited Seepage Slope	1.00 0.91
7610: Valent-----	90	Very limited Filtering capacity	1.00	Very limited Seepage	1.00
7612: Valent-----	95	Very limited Filtering capacity	1.00	Very limited Seepage Slope	1.00 0.91
7616: Valent-----	90	Very limited Filtering capacity Slope	1.00 1.00	Very limited Slope Seepage	1.00 1.00
7618: Valent-----	55	Very limited Filtering capacity Slope	1.00 1.00	Very limited Slope Seepage	1.00 1.00
Valent-----	35	Very limited Filtering capacity Slope	1.00 1.00	Very limited Slope Seepage	1.00 1.00
9999a: Water-----	100	Not rated		Not rated	

SANITARY FACILITIES--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value

SANITARY FACILITIES--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1331: Bankard-----	95	Very limited Flooding Too Sandy	1.00 1.00	Very limited Flooding	1.00	Very limited Too Sandy Seepage	1.00 1.00
1465: Benkelman-----	95	Not limited		Not limited		Not limited	
1500: Blackwood-----	98	Not limited		Not limited		Not limited	
1502: Blackwood-----	98	Not limited		Not limited		Not limited	
1524: Blanche-----	90	Very limited Depth to bedrock	1.00	Not limited		Very limited Depth to bedrock Seepage	1.00 0.51
1526: Blanche-----	90	Very limited Depth to bedrock	1.00	Not limited		Very limited Depth to bedrock Seepage	1.00 0.51
1700: Bolent-----	65	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Too Sandy Seepage Depth to saturated zone	1.00 1.00 0.68
Almeria-----	25	Too Sandy Very limited Flooding Depth to saturated zone Seepage Too Sandy	1.00 1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Too Sandy Seepage Depth to saturated zone	1.00 1.00 1.00
1940: Calamus-----	90	Very limited Depth to saturated zone Seepage Too Sandy Flooding	1.00 1.00 1.00 0.40	Very limited Depth to saturated zone Seepage Flooding	1.00 1.00 0.40	Very limited Too Sandy Seepage	1.00 1.00
2140: Colfer-----	90	Very limited Too Sandy	1.00	Not limited		Very limited Seepage Too Sandy	1.00 0.50
2250: Craft-----	95	Somewhat limited Flooding	0.40	Somewhat limited Flooding	0.40	Not limited	
2254: Craft-----	95	Very limited Flooding	1.00	Very limited Flooding	1.00	Not limited	
2394: Dailey-----	85	Very limited Seepage Too Sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Too Sandy Seepage	1.00 1.00
2630: Duroc-----	98	Not limited		Not limited		Not limited	
3280: Haigler-----	90	Very limited Depth to saturated zone Sodium content Seepage Too Sandy Flooding	1.00 1.00 1.00 1.00 0.40	Very limited Depth to saturated zone Seepage Flooding	1.00 1.00 0.40	Very limited Too Sandy Seepage Sodium content	1.00 1.00 1.00
4042: Jayem-----	90	Not limited		Not limited		Somewhat limited Seepage	0.51
4140: Kanorado-----	95	Very limited Depth to bedrock Too clayey Slope	1.00 0.50 0.00	Somewhat limited Depth to bedrock Slope	0.88 0.00	Somewhat limited Depth to bedrock Too clayey Slope	0.88 0.50 0.00
4380: Laird-----	90	Not limited		Not limited		Not limited	
4665: Lodgepole-----	95	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey	1.00 1.00 1.00

SANITARY FACILITIES--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
4667: Lodgepole-----	95	Very limited Depth to saturated zone Ponding Too clayey	1.00 1.00 1.00	Very limited Ponding Depth to saturated zone	1.00 1.00	Very limited Ponding Depth to saturated zone Too clayey	1.00 1.00 1.00
5949: Otero-----	90	Not limited		Not limited		Somewhat limited Seepage	0.51
5975: Overlake-----	90	Not limited		Not limited		Somewhat limited Seepage	0.51
6091: Pits-----	100	Not rated		Not rated		Not rated	
6570: Sanborn-----	90	Very limited Depth to saturated zone Sodium content Seepage Too Sandy Flooding	1.00 1.00 1.00 1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Too Sandy Seepage Sodium content Depth to saturated zone	1.00 1.00 1.00 0.68
6632: Sarben-----	85	Not limited		Not limited		Somewhat limited Seepage	0.51
6633: Sarben-----	85	Not limited		Not limited		Somewhat limited Seepage	0.51
6634: Sarben-----	85	Somewhat limited Slope	0.00	Somewhat limited Slope	0.00	Somewhat limited Seepage Slope	0.51 0.00
6635: Sarben-----	85	Very limited Too Sandy Slope	1.00 1.00	Very limited Slope	1.00	Very limited Too Sandy Seepage Slope	1.00 1.00 1.00
6700: Satanta-----	85	Not limited		Not limited		Not limited	
6820: Scoville-----	90	Very limited Too Sandy	1.00	Not limited		Very limited Too Sandy Seepage	1.00 1.00
7090: Sulco-----	85	Not limited		Not limited		Not limited	
7096: Sulco-----	95	Not limited		Not limited		Not limited	
7098: Sulco-----	95	Not limited		Not limited		Not limited	
7100: Sulco-----	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
7102: Sulco, eroded-----	70	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Sulco-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
7152: Tassel-----	50	Very limited Slope Depth to bedrock	1.00 1.00	Very limited Slope	1.00	Very limited Depth to bedrock Slope Seepage	1.00 1.00 0.51
Ashollow-----	25	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Seepage	1.00 0.51
Rock Outcrop-----	25	Not rated		Not rated		Not rated	
7461: Ulysses-----	95	Not limited		Not limited		Not limited	
7462: Ulysses-----	90	Not limited		Not limited		Not limited	
7602: Valent-----	90	Very limited Too Sandy	1.00	Not limited		Very limited Too Sandy Seepage	1.00 1.00

SANITARY FACILITIES--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
7610: Valent-----	90	Very limited Too Sandy	1.00	Not limited		Very limited Too Sandy Seepage	1.00 1.00
7612: Valent-----	95	Very limited Too Sandy	1.00	Not limited		Very limited Too Sandy Seepage	1.00 1.00
7616: Valent-----	90	Very limited Too Sandy Slope	1.00 1.00	Very limited Slope	1.00	Very limited Too Sandy Seepage Slope	1.00 1.00 1.00
7618: Valent-----	55	Very limited Slope Too Sandy	1.00 1.00	Very limited Slope	1.00	Very limited Slope Too Sandy Seepage	1.00 1.00 1.00
Valent-----	35	Very limited Too Sandy Slope	1.00 1.00	Very limited Slope	1.00	Very limited Too Sandy Seepage Slope	1.00 1.00 1.00
9999a: Water-----	100	Not rated		Not rated		Not rated	

AGRICULTURAL WASTE MANAGEMENT
Dundy County, Nebraska

The nature of the soil is also important in the application of organic wastes and wastewater to land as fertilizers and irrigation; it is also important when the soil is used as a medium for treatment and disposal of these wastes. Favorable soil properties are required to prevent environmental damage.

The use of organic wastes and wastewater as production resources will result in energy conservation, prevent the waste of these important resources, and prevent problems associated with their disposal. Where disposal is the goal, and a maximum amount is disposed in a minimum area to hold costs to a minimum, risk of environmental damage is the principal constraint. Where the reuse goal is pursued, and a minimum amount is applied to a maximum area to obtain the greatest benefit, environmental damage is unlikely.

Interpretations developed for waste management may include ratings for (1) manure and food processing wastes; (2) municipal sewage sludge; (3) irrigation use of wastewater; or (4) treatment of wastewater by the slow rate process, overland flow process, or rapid infiltration process. If available, these should be located in this subsection.

Soil properties are important considerations in areas where soils are used as sites for the treatment and disposal of organic waste and wastewater. Selection of soils with properties that favor waste management can help to prevent environmental damage.

The Ag-Waste tables show the degree and kind of soil limitations affecting the treatment of agricultural waste, including municipal and food-processing wastewater and effluent from lagoons or storage ponds. Municipal wastewater is the waste stream from a municipality. It contains domestic waste and may contain industrial waste. It may have received primary or secondary treatment. It is rarely untreated sewage. Food-processing wastewater results from the preparation of fruits, vegetables, milk, cheese, and meats for public consumption. In places it is high in content of sodium and chloride. In the context of these tables, the effluent in lagoons and storage ponds is from facilities used to treat or store food-processing wastewater or domestic or animal waste. Domestic and food-processing wastewater is very dilute, and the effluent from the facilities that treat or store it commonly is very low in content of carbonaceous and nitrogenous material; the content of nitrogen commonly ranges from 10 to 30 milligrams per liter. The wastewater from animal waste treatment lagoons or storage ponds, however, has much higher concentrations of these materials, mainly because the manure has not been diluted as much as the domestic waste. The content of nitrogen in this wastewater generally ranges from 50 to 2,000 milligrams per liter. When wastewater is applied, checks should be made to ensure that nitrogen, phosphorus, heavy metals, and salts are not added in excessive amounts.

The ratings in the tables are for waste management systems that not only dispose of and treat organic waste or wastewater but also are beneficial to crops (application of manure and food-processing waste, application of sewage sludge, and disposal of wastewater by irrigation) and for waste management systems that are designed only for the purpose of wastewater disposal and treatment (overland flow of wastewater, rapid infiltration of wastewater, and slow rate treatment of wastewater).

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect agricultural waste management. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are generally favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Application of manure and food-processing waste not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. Manure is the excrement of livestock and poultry, and food-processing waste is damaged fruit and vegetables and the peelings, stems, leaves, pits, and soil particles removed in food preparation. The manure and food-processing waste are either solid, slurry, or liquid. Their nitrogen content varies. A high content of nitrogen limits the application rate. Toxic or otherwise dangerous wastes, such as those mixed with the lye used in food processing, are not considered in the ratings.

The ratings are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the waste is applied, and the method by which the waste is applied. The properties that affect absorption include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, and available water capacity. The properties that affect plant growth and microbial activity include reaction, the sodium adsorption ratio, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

Application of sewage sludge not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. In the context of this table, sewage sludge is the residual product of the treatment of municipal sewage. The solid component consists mainly of cell mass, primarily bacteria cells that developed during secondary treatment and have incorporated soluble organics into their own bodies. The sludge has small amounts of sand, silt, and other solid debris. The content of nitrogen varies. Some sludge has constituents that are toxic to plants or hazardous to the food chain, such as heavy metals and exotic organic compounds, and should be analyzed chemically prior to use.

AGRICULTURAL WASTE MANAGEMENT
Dundy County, Nebraska

The content of water in the sludge ranges from about 98 percent to less than 40 percent. The sludge is considered liquid if it is more than about 90 percent water, slurry if it is about 50 to 90 percent water, and solid if it is less than about 50 percent water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the sludge is applied, and the method by which the sludge is applied. The properties that affect absorption, plant growth, and microbial activity include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, available water capacity, reaction, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of sludge. Permanently frozen soils are unsuitable for waste treatment.

Disposal of wastewater by irrigation not only disposes of municipal wastewater and wastewater from food-processing plants, lagoons, and storage ponds but also can improve crop production by increasing the amount of water available to crops. The ratings in the table are based on the soil properties that affect the design, construction, management, and performance of the irrigation system. The properties that affect design and management include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, permeability, slope, and flooding. The properties that affect construction include stones, cobbles, depth to bedrock or a cemented pan, depth to a water table, and ponding.

The properties that affect performance include depth to bedrock or a cemented pan, bulk density, the sodium adsorption ratio, salinity, reaction, and the cation-exchange capacity, which is used to estimate the capacity of a soil to adsorb heavy metals. Permanently frozen soils are not suitable for disposal of wastewater by irrigation.

See the National Soil Handbook, September 1992, Part 620, for criteria used in rating soils for sanitary facilities and waste management.

AGRICULTURAL WASTE MANAGEMENT--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1331: Bankard-----	95	Very limited Filtering capacity Droughty Flooding Leaching limitation	1.00 0.82 0.60 0.45	Very limited Filtering capacity Flooding Droughty	1.00 1.00 0.82	Very limited Filtering capacity Droughty Flooding	1.00 0.82 0.60
1465: Benkelman-----	95	Not limited		Not limited		Not limited	
1500: Blackwood-----	98	Not limited		Not limited		Not limited	
1502: Blackwood-----	98	Not limited		Not limited		Not limited	
1524: Blanche-----	90	Very limited Filtering capacity Droughty Depth to bedrock	1.00 0.99 0.97	Very limited Filtering capacity Droughty Depth to bedrock	1.00 0.99 0.97	Very limited Filtering capacity Droughty Depth to bedrock	1.00 0.99 0.97
1526: Blanche-----	90	Very limited Filtering capacity Droughty Depth to bedrock	1.00 0.76 0.65	Very limited Filtering capacity Droughty Depth to bedrock	1.00 0.76 0.65	Very limited Filtering capacity Droughty Depth to bedrock Too steep for surface application	1.00 0.76 0.65 0.08
1700: Bolent-----	65	Very limited Filtering capacity Depth to saturated zone Flooding Leaching limitation Droughty	1.00 0.95 0.60 0.45 0.15	Very limited Filtering capacity Flooding Depth to saturated zone Droughty	1.00 1.00 0.95 0.15	Very limited Filtering capacity Depth to saturated zone Flooding Droughty	1.00 0.95 0.60 0.15
Almeria-----	25	Very limited Filtering capacity Depth to saturated zone Flooding Runoff limitation	1.00 1.00 1.00 0.40	Very limited Filtering capacity Depth to saturated zone Flooding	1.00 1.00 1.00	Very limited Filtering capacity Depth to saturated zone Flooding	1.00 1.00 1.00
1940: Calamus-----	90	Very limited Filtering capacity Droughty Leaching limitation	1.00 0.74 0.45	Very limited Filtering capacity Droughty Flooding	1.00 0.74 0.40	Very limited Filtering capacity Droughty	1.00 0.74
2140: Colfer-----	90	Very limited Filtering capacity Leaching limitation	1.00 0.45	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
2250: Craft-----	95	Not limited		Somewhat limited Flooding	0.40	Not limited	
2254: Craft-----	95	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
2394: Dailey-----	85	Very limited Filtering capacity Leaching limitation Droughty	1.00 0.45 0.04	Very limited Filtering capacity Droughty	1.00 0.04	Very limited Filtering capacity Droughty	1.00 0.04
2630: Duroc-----	98	Not limited		Not limited		Not limited	
3280: Haigler-----	90	Very limited		Very limited		Very limited	

AGRICULTURAL WASTE MANAGEMENT--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
4042: Jayem-----	90	Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Sodium content	1.00	Sodium content	1.00	Sodium content	1.00
		Salinity	0.06	Flooding	0.40		
4140: Kanorado-----	95	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Low adsorption	0.01	Slope	0.00	Too steep for surface application	1.00
		Slope	0.00			Too steep for sprinkler application	0.10
4380: Laird-----	90					Low adsorption	0.01
		Somewhat limited Sodium content	0.87	Somewhat limited Sodium content	0.87	Somewhat limited Sodium content	0.87
4665: Lodgepole-----	95	Filtering capacity	0.00	Filtering capacity	0.00	Filtering capacity	0.00
		Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
4667: Lodgepole-----	95	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Runoff limitation	0.40	Too acid	0.03	Too acid	0.03
		Too acid	0.01				
		Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
5949: Otero-----	90	Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Runoff limitation	0.40	Too acid	0.03	Too acid	0.03
5975: Overlake-----	90	Too acid	0.01				
		Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00
6091: Pits-----	100	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Leaching limitation	0.45				
6570: Sanborn-----	90	Not rated		Not rated		Not rated	
		Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Sodium content	1.00	Sodium content	1.00	Sodium content	1.00
		Depth to saturated zone	0.95	Depth to saturated zone	0.95	Depth to saturated zone	0.95
6632: Sarben-----	85	Salinity	0.00	Flooding Salinity	0.40 0.00	Salinity	0.00
		Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
6633: Sarben-----	85	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
						Too steep for surface application	0.08

AGRICULTURAL WASTE MANAGEMENT--Continued
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(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
6634: Sarben-----	85	Very limited Filtering capacity Slope	1.00 0.00	Very limited Filtering capacity Slope	1.00 0.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 0.10
6635: Sarben-----	85	Very limited Filtering capacity Slope	1.00 1.00	Very limited Filtering capacity Slope	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00
6700: Satanta-----	85	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00
6820: Scoville-----	90	Very limited Filtering capacity Leaching limitation	1.00 0.45	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
7090: Sulco-----	85	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Too steep for surface application Filtering capacity	0.17 0.00
7096: Sulco-----	95	Not limited		Not limited		Somewhat limited Too steep for surface application	0.17
7098: Sulco-----	95	Not limited		Not limited		Somewhat limited Too steep for surface application Too steep for sprinkler application	0.97 0.05
7100: Sulco-----	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
7102: Sulco, eroded-----	70	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Sulco-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
7152: Tassel-----	50	Very limited Slope Depth to bedrock Low adsorption	1.00 1.00 1.00	Very limited Droughty Depth to bedrock Slope	1.00 1.00 1.00	Very limited Droughty Depth to bedrock Low adsorption	1.00 1.00 1.00

AGRICULTURAL WASTE MANAGEMENT--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ashollow-----	25	Droughty	1.00	Filtering capacity	0.00	Too steep for surface application	1.00
		Runoff limitation	0.40			Too steep for sprinkler application	1.00
		Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application	1.00
		Filtering capacity	0.00	Filtering capacity	0.00	Too steep for sprinkler application	1.00
Rock Outcrop-----	25	Not rated		Not rated		Filtering capacity	0.00
						Not rated	
7461: Ulysses-----	95	Not limited		Not limited		Not limited	
7462: Ulysses-----	90	Not limited		Not limited		Somewhat limited Too steep for surface application	0.17
7602: Valent-----	90	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Leaching limitation	0.45	Droughty	0.14	Too steep for surface application	0.66
		Droughty	0.14			Droughty Too steep for sprinkler application	0.14 0.00
7610: Valent-----	90	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Droughty Leaching limitation	0.84 0.45	Droughty	0.84	Droughty	0.84
7612: Valent-----	95	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Leaching limitation	0.45	Droughty	0.20	Too steep for surface application	0.66
		Droughty	0.20			Droughty Too steep for sprinkler application	0.20 0.00
7616: Valent-----	90	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
		Leaching limitation	0.45	Droughty	0.20	Too steep for sprinkler application	1.00
		Droughty	0.20			Droughty	0.20
7618: Valent-----	55	Very limited Slope	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Filtering capacity	1.00	Slope	1.00	Too steep for surface application	1.00
		Droughty	0.89	Droughty	0.89	Too steep for sprinkler application	1.00

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Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Valent-----	35	Leaching limitation	0.45	Very limited Filtering capacity Slope	1.00	Droughty	0.89
		Very limited	1.00			Very limited	1.00
		Filtering capacity	1.00			Filtering capacity	1.00
		Slope	1.00			Too steep for surface application	1.00
		Droughty	0.89			Too steep for sprinkler application	1.00
9999a: Water-----	100	Leaching limitation	0.45	Not rated		Droughty	0.89
		Not rated				Not rated	

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The nature of the soil is also important in the application of organic wastes and wastewater to land as fertilizers and irrigation; it is also important when the soil is used as a medium for treatment and disposal of these wastes. Favorable soil properties are required to prevent environmental damage.

The use of organic wastes and wastewater as production resources will result in energy conservation, prevent the waste of these important resources, and prevent problems associated with their disposal. Where disposal is the goal, and a maximum amount is disposed in a minimum area to hold costs to a minimum, risk of environmental damage is the principal constraint. Where the reuse goal is pursued, and a minimum amount is applied to a maximum area to obtain the greatest benefit, environmental damage is unlikely.

Interpretations developed for waste management may include ratings for (1) manure and food processing wastes; (2) municipal sewage sludge; (3) irrigation use of wastewater; or (4) treatment of wastewater by the slow rate process, overland flow process, or rapid infiltration process. If available, these should be located in this subsection.

Soil properties are important considerations in areas where soils are used as sites for the treatment and disposal of organic waste and wastewater. Selection of soils with properties that favor waste management can help to prevent environmental damage.

The Ag-Waste tables show the degree and kind of soil limitations affecting the treatment of agricultural waste, including municipal and food-processing wastewater and effluent from lagoons or storage ponds. Municipal wastewater is the waste stream from a municipality. It contains domestic waste and may contain industrial waste. It may have received primary or secondary treatment. It is rarely untreated sewage. Food-processing wastewater results from the preparation of fruits, vegetables, milk, cheese, and meats for public consumption. In places it is high in content of sodium and chloride. In the context of these tables, the effluent in lagoons and storage ponds is from facilities used to treat or store food-processing wastewater or domestic or animal waste. Domestic and food-processing wastewater is very dilute, and the effluent from the facilities that treat or store it commonly is very low in content of carbonaceous and nitrogenous material; the content of nitrogen commonly ranges from 10 to 30 milligrams per liter. The wastewater from animal waste treatment lagoons or storage ponds, however, has much higher concentrations of these materials, mainly because the manure has not been diluted as much as the domestic waste. The content of nitrogen in this wastewater generally ranges from 50 to 2,000 milligrams per liter. When wastewater is applied, checks should be made to ensure that nitrogen, phosphorus, heavy metals, and salts are not added in excessive amounts.

The ratings in the tables are for waste management systems that not only dispose of and treat organic waste or wastewater but also are beneficial to crops (application of manure and food-processing waste, application of sewage sludge, and disposal of wastewater by irrigation) and for waste management systems that are designed only for the purpose of wastewater disposal and treatment (overland flow of wastewater, rapid infiltration of wastewater, and slow rate treatment of wastewater).

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect agricultural waste management. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are generally favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Application of manure and food-processing waste not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. Manure is the excrement of livestock and poultry, and food-processing waste is damaged fruit and vegetables and the peelings, stems, leaves, pits, and soil particles removed in food preparation. The manure and food-processing waste are either solid, slurry, or liquid. Their nitrogen content varies. A high content of nitrogen limits the application rate. Toxic or otherwise dangerous wastes, such as those mixed with the lye used in food processing, are not considered in the ratings.

The ratings are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the waste is applied, and the method by which the waste is applied. The properties that affect absorption include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, and available water capacity. The properties that affect plant growth and microbial activity include reaction, the sodium adsorption ratio, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

Application of sewage sludge not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. In the context of this table, sewage sludge is the residual product of the treatment of municipal sewage. The solid component consists mainly of cell mass, primarily bacteria cells that developed during secondary treatment and have incorporated soluble organics into their own bodies. The sludge has small amounts of sand, silt, and other solid debris. The content of nitrogen varies. Some sludge has constituents that are toxic to plants or hazardous to the food chain, such as heavy metals and exotic organic compounds, and should be analyzed chemically prior to use.

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The content of water in the sludge ranges from about 98 percent to less than 40 percent. The sludge is considered liquid if it is more than about 90 percent water, slurry if it is about 50 to 90 percent water, and solid if it is less than about 50 percent water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the sludge is applied, and the method by which the sludge is applied. The properties that affect absorption, plant growth, and microbial activity include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, available water capacity, reaction, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of sludge. Permanently frozen soils are unsuitable for waste treatment.

Disposal of wastewater by irrigation not only disposes of municipal wastewater and wastewater from food-processing plants, lagoons, and storage ponds but also can improve crop production by increasing the amount of water available to crops. The ratings in the table are based on the soil properties that affect the design, construction, management, and performance of the irrigation system. The properties that affect design and management include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, permeability, slope, and flooding. The properties that affect construction include stones, cobbles, depth to bedrock or a cemented pan, depth to a water table, and ponding.

The properties that affect performance include depth to bedrock or a cemented pan, bulk density, the sodium adsorption ratio, salinity, reaction, and the cation-exchange capacity, which is used to estimate the capacity of a soil to adsorb heavy metals. Permanently frozen soils are not suitable for disposal of wastewater by irrigation.

See the National Soil Handbook, September 1992, Part 620, for criteria used in rating soils for sanitary facilities and waste management.

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Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1331: Bankard-----	95	Very limited Filtering capacity Droughty Flooding Leaching limitation	1.00 0.82 0.60 0.45	Very limited Filtering capacity Flooding Droughty	1.00 1.00 0.82	Very limited Filtering capacity Droughty Flooding	1.00 0.82 0.60
1465: Benkelman-----	95	Not limited		Not limited		Not limited	
1500: Blackwood-----	98	Not limited		Not limited		Not limited	
1502: Blackwood-----	98	Not limited		Not limited		Not limited	
1524: Blanche-----	90	Very limited Filtering capacity Droughty Depth to bedrock	1.00 0.99 0.97	Very limited Filtering capacity Droughty Depth to bedrock	1.00 0.99 0.97	Very limited Filtering capacity Droughty Depth to bedrock	1.00 0.99 0.97
1526: Blanche-----	90	Very limited Filtering capacity Droughty Depth to bedrock	1.00 0.76 0.65	Very limited Filtering capacity Droughty Depth to bedrock	1.00 0.76 0.65	Very limited Filtering capacity Droughty Depth to bedrock Too steep for surface application	1.00 0.76 0.65 0.08
1700: Bolent-----	65	Very limited Filtering capacity Depth to saturated zone Flooding Leaching limitation Droughty	1.00 0.95 0.60 0.45 0.15	Very limited Filtering capacity Flooding Depth to saturated zone Droughty	1.00 1.00 0.95 0.15	Very limited Filtering capacity Depth to saturated zone Flooding Droughty	1.00 0.95 0.60 0.15
Almeria-----	25	Very limited Filtering capacity Depth to saturated zone Flooding Runoff limitation	1.00 1.00 1.00 0.40	Very limited Filtering capacity Depth to saturated zone Flooding	1.00 1.00 1.00	Very limited Filtering capacity Depth to saturated zone Flooding	1.00 1.00 1.00
1940: Calamus-----	90	Very limited Filtering capacity Droughty Leaching limitation	1.00 0.74 0.45	Very limited Filtering capacity Droughty Flooding	1.00 0.74 0.40	Very limited Filtering capacity Droughty	1.00 0.74
2140: Colfer-----	90	Very limited Filtering capacity Leaching limitation	1.00 0.45	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
2250: Craft-----	95	Not limited		Somewhat limited Flooding	0.40	Not limited	
2254: Craft-----	95	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
2394: Dailey-----	85	Very limited Filtering capacity Leaching limitation Droughty	1.00 0.45 0.04	Very limited Filtering capacity Droughty	1.00 0.04	Very limited Filtering capacity Droughty	1.00 0.04
2630: Duroc-----	98	Not limited		Not limited		Not limited	
3280: Haigler-----	90	Very limited		Very limited		Very limited	

AGRICULTURAL WASTE MANAGEMENT--Continued
Dundy County, Nebraska

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 1.00. The larger the value, the greater the potential limitation. See text for further explanation of ratings in this table.)

Map symbol and soil name	Pct of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
4042: Jayem-----	90	Filtering capacity	1.00	Filtering capacity	1.00	Filtering capacity	1.00
		Sodium content	1.00	Sodium content	1.00	Sodium content	1.00
		Salinity	0.06	Flooding	0.40		
4140: Kanorado-----	95	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
		Low adsorption	0.01	Slope	0.00	Too steep for surface application	1.00
		Slope	0.00			Too steep for sprinkler application	0.10
4380: Laird-----	90					Low adsorption	0.01
		Somewhat limited Sodium content	0.87	Somewhat limited Sodium content	0.87	Somewhat limited Sodium content	0.87
4665: Lodgepole-----	95	Filtering capacity	0.00	Filtering capacity	0.00	Filtering capacity	0.00
		Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
4667: Lodgepole-----	95	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Runoff limitation	0.40	Too acid	0.03	Too acid	0.03
		Too acid	0.01				
5949: Otero-----	90	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
5975: Overlake-----	90	Runoff limitation	0.40	Too acid	0.03	Too acid	0.03
		Too acid	0.01				
		Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00
6091: Pits-----	100	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Leaching limitation	0.45				
6570: Sanborn-----	90	Not rated		Not rated		Not rated	
		Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Sodium content	1.00	Sodium content	1.00	Sodium content	1.00
6632: Sarben-----	85	Depth to saturated zone	0.95	Depth to saturated zone	0.95	Depth to saturated zone	0.95
		Salinity	0.00	Flooding Salinity	0.40 0.00	Salinity	0.00
		Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
6633: Sarben-----	85	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
						Too steep for surface application	0.08

AGRICULTURAL WASTE MANAGEMENT--Continued
Dundy County, Nebraska

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Map symbol and soil name	Pct of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
6634: Sarben-----	85	Very limited Filtering capacity Slope	1.00 0.00	Very limited Filtering capacity Slope	1.00 0.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 0.10
6635: Sarben-----	85	Very limited Filtering capacity Slope	1.00 1.00	Very limited Filtering capacity Slope	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00
6700: Satanta-----	85	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00
6820: Scoville-----	90	Very limited Filtering capacity Leaching limitation	1.00 0.45	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
7090: Sulco-----	85	Somewhat limited Filtering capacity	0.00	Somewhat limited Filtering capacity	0.00	Somewhat limited Too steep for surface application Filtering capacity	0.17 0.00
7096: Sulco-----	95	Not limited		Not limited		Somewhat limited Too steep for surface application	0.17
7098: Sulco-----	95	Not limited		Not limited		Somewhat limited Too steep for surface application Too steep for sprinkler application	0.97 0.05
7100: Sulco-----	85	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
7102: Sulco, eroded-----	70	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
Sulco-----	20	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application Too steep for sprinkler application	1.00 1.00
7152: Tassel-----	50	Very limited Slope Depth to bedrock Low adsorption	1.00 1.00 1.00	Very limited Droughty Depth to bedrock Slope	1.00 1.00 1.00	Very limited Droughty Depth to bedrock Low adsorption	1.00 1.00 1.00

AGRICULTURAL WASTE MANAGEMENT--Continued
Dundy County, Nebraska

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Map symbol and soil name	Pct of map unit	Application of manure and food-processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Ashollow-----	25	Droughty	1.00	Filtering capacity	0.00	Too steep for surface application	1.00
		Runoff limitation	0.40			Too steep for sprinkler application	1.00
		Very limited Slope	1.00	Very limited Slope	1.00	Very limited Too steep for surface application	1.00
		Filtering capacity	0.00	Filtering capacity	0.00	Too steep for sprinkler application	1.00
Rock Outcrop-----	25	Not rated		Not rated		Filtering capacity	0.00
						Not rated	
7461: Ulysses-----	95	Not limited		Not limited		Not limited	
7462: Ulysses-----	90	Not limited		Not limited		Somewhat limited Too steep for surface application	0.17
7602: Valent-----	90	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Leaching limitation	0.45	Droughty	0.14	Too steep for surface application	0.66
		Droughty	0.14			Droughty Too steep for sprinkler application	0.14 0.00
7610: Valent-----	90	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Droughty Leaching limitation	0.84 0.45	Droughty	0.84	Droughty	0.84
7612: Valent-----	95	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Leaching limitation	0.45	Droughty	0.20	Too steep for surface application	0.66
		Droughty	0.20			Droughty Too steep for sprinkler application	0.20 0.00
7616: Valent-----	90	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Slope	1.00	Slope	1.00	Too steep for surface application	1.00
		Leaching limitation	0.45	Droughty	0.20	Too steep for sprinkler application	1.00
		Droughty	0.20			Droughty	0.20
7618: Valent-----	55	Very limited Slope	1.00	Very limited Filtering capacity	1.00	Very limited Filtering capacity	1.00
		Filtering capacity	1.00	Slope	1.00	Too steep for surface application	1.00
		Droughty	0.89	Droughty	0.89	Too steep for sprinkler application	1.00

AGRICULTURAL WASTE MANAGEMENT--Continued
Dundy County, Nebraska

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Map symbol and soil name	Pct of map unit	Application of manure and food- processing waste		Application of sewage sludge		Disposal of wastewater by irrigation	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
Valent-----	35	Leaching limitation	0.45	Very limited Filtering capacity Slope	1.00	Droughty	0.89
		Very limited	1.00			Very limited	1.00
		Filtering capacity	1.00			Filtering capacity	1.00
		Slope	1.00			Too steep for surface application	1.00
		Droughty	0.89			Too steep for sprinkler application	1.00
9999a: Water-----	100	Leaching limitation	0.45	Not rated		Droughty	0.89
		Not rated				Not rated	

HIGHLY ERODIBLE LANDS REPORT
Dundy County, Nebraska

Map Symbol	Soil Mapunit Name	HEL Classification R=100 C=60		
		Wind	Water	MU
1331	BANKARD SAND, 0 TO 2 PERCENT SLOPES, OCCASIONALLY FLOODED	1	3	1
1465	BENKELMAN VERY FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	1	3	1
1500	BLACKWOOD LOAM, 0 TO 1 PERCENT SLOPES	3	3	3
1502	BLACKWOOD LOAM, 1 TO 3 PERCENT SLOPES	3	3	3
1524	BLANCHE LOAMY SAND, 0 TO 3 PERCENT SLOPES	1	3	1
1526	BLANCHE LOAMY SAND, 3 TO 6 PERCENT SLOPES	1	3	1
1700	BOLENT-ALMERIA COMPLEX, 0 TO 2 PERCENT SLOPES, CHANNELED, FREQUENTLY FLOODED	2	3	2
1940	CALAMUS COARSE SAND, 0 TO 2 PERCENT SLOPES, RARELY FLOODED	1	3	1
2140	COLFER SAND, 0 TO 3 PERCENT SLOPES	1	3	1
2250	CRAFT VERY FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES, RARELY FLOODED	1	3	1
2254	CRAFT VERY FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES, CHANNELED, FREQUENTLY FLOODED	1	3	1
2394	DAILEY LOAMY SAND, 0 TO 3 PERCENT SLOPES	1	3	1
2630	DUROC LOAM, 0 TO 1 PERCENT SLOPES	3	3	3
3280	HAIGLER VERY FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES, RARELY FLOODED	1	3	1
4042	JAYEM LOAMY SAND, 0 TO 3 PERCENT SLOPES	1	3	1
4140	KANORADO SILTY CLAY LOAM, 6 TO 9 PERCENT SLOPES	1	1	1
4380	LAIRD FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	1	3	1
4665	LODGEPOLE SILTY CLAY LOAM, OCCASIONALLY PONDED, 0 TO 1 PERCENT SLOPES	3	3	3
4667	LODGEPOLE SILTY CLAY LOAM, FREQUENTLY PONDED, 0 TO 1 PERCENT SLOPES	3	3	3
5949	OTERO FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	1	3	1
5975	OVERLAKE SAND, 0 TO 3 PERCENT SLOPES	1	3	1
6091	PITS, SAND AND GRAVEL			
6570	SANBORN LOAM, 0 TO 2 PERCENT SLOPES, RARELY FLOODED	1	3	1
6632	SARBEN LOAMY SAND, 0 TO 3 PERCENT SLOPES	1	3	1
6633	SARBEN LOAMY SAND, 3 TO 6 PERCENT SLOPES	1	3	1
6634	SARBEN LOAMY SAND, 6 TO 9 PERCENT SLOPES	1	2	1
6635	SARBEN LOAMY SAND, 9 TO 30 PERCENT SLOPES	1	1	1
6700	SATANTA FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES	1	3	1
6820	SCOVILLE LOAMY SAND, CALCAREOUS, 1 TO 3 PERCENT SLOPES	1	3	1
7090	SULCO FINE SANDY LOAM, 3 TO 6 PERCENT SLOPES	1	3	1
7096	SULCO LOAM, 3 TO 6 PERCENT SLOPES	1	3	1
7098	SULCO LOAM, 6 TO 9 PERCENT SLOPES	1	2	1
7100	SULCO LOAM, 9 TO 30 PERCENT SLOPES	1	1	1
7102	SULCO COMPLEX, 9 TO 60 PERCENT SLOPES	1	1	1
7152	TASSEL-ASHOLLOW-ROCK OUTCROP COMPLEX, 9 TO 60 PERCENT SLOPES	1	1	1
7461	ULYSSES LOAM, 1 TO 3 PERCENT SLOPES	3	3	3
7462	ULYSSES LOAM, 3 TO 6 PERCENT SLOPES	3	3	3
7602	VALENT LOAMY SAND, 3 TO 9 PERCENT SLOPES	1	2	1
7610	VALENT SAND, 0 TO 3 PERCENT SLOPES	1	3	1
7612	VALENT SAND, 3 TO 9 PERCENT SLOPES	1	3	1
7616	VALENT SAND, ROLLING	1	1	1
7618	VALENT COMPLEX, ROLLING AND HILLY	1	1	1
9999a	WATER AREAS GREATER THAN 40 ACRES			

